ARTICLE V.—The Library shall be divided into TWO CLASSES; the first comprising such works as, from their rarity or value, should not be lent out, all unbound periodicals, and such text books as ought to be found in a library of reference except when required by Committees of the Institute, or by members or holders of second class stock, who have obtained the sanction of the Committee. The second class shall include those books intended for circulation.

ARTICLE VI.—The Secretary shall have authority to loan to Members and to holders of second class stock, any work belonging to the SECOND CLASS, subject to the following regulations:

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ARTICLE VII.—Any person removing from the Hall, without permission from the proper authorities, any book, newspaper or other property in charge of the Library Committee, shall be reported to the Committee, who may inflict any fine not exceeding twenty-five dollars.

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THE INLAND ARCHITECT AND NEWS RECORD

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Progress in Columbian Exposition Work.

Since our last issue three additional architects have been added to the architectural bureau. Holabird & Roche, of Chicago, have been appointed to design the live-stock building; Bauer & Hill, of Chicago, the music hall, and Treat & Foltz, of Chicago, the electric building for the Lake Front. Since these appointments were made the Lake Front has been practically abandoned and the construction of the music hall is problematical. It will probably be built at Jackson Park if at all, while the building for electric display goes with the Lake Front, as there is already a similar building designed and located at the Jackson Park site. The chief of construction has therefore notified Architects Bauer & Hill and Treat & Foltz to suspend work on their buildings. Augustus St. Gaudens, the sculptor, has been retained in connection with such monumental or statuary work as may be decided upon. On February 23, the architectural bureau, including Architect W. W. Boyington, of Chicago, who is designing the building for the State of Illinois, met in Chicago and submitted their sketches. These were passed upon by the chief of construction, the Committee on Buildings and Grounds and the National Board of Control, and approved, with such alterations as were necessary. It will be several weeks before the final plans will be completed, those of the mining and horticulture buildings probably being first in the field for bids. The art building for the Lake Front, the last design executed by the late John W. Root, is involved in the abandonment of that locality for World's Fair purposes. If not built there it will probably not be built at all. The designs are for a permanent structure, and as far as executed, show perhaps, the best example of Romanesque work designed by him. This building should, at least, be erected on the Lake Front site, as its abandonment would show that there is truth in the belief too common in the East, that Chicago has no true art sentiment, but is thoroughly commercial in her instincts. We do not believe, however, that the art building, as projected, will be abandoned. It has been advocated by men who do not allow such obstacles as politics and congressional committees can throw in their way to defeat plans they have determined to carry through, and this last great work of our last great architect will stand a monument to that architectural genius that has gone from among us, and a stronghold for art centered in the western metropolis.

Columbian Exposition Woman's Building.

Late developments in congress may lead to the abandonment of the woman's department as a department, but unless this is done there will probably be a "woman's building" for the administration of the affairs connected with the work of the lady managers. It was proposed to appoint a lady architect to design this. Since the death of the consulting architect this plan seems to have changed, and while all other architects have been appointed, it seems to have struck some brilliant mind that the proper way to procure plans would be by a competition among women architects. This was consented to, though not thought advisable, by the chief of construction, and women architects invited to compete. The result will be to the almost certain discredit of woman architects. They are few in number in the United

States, only three in regular practice being known to us. But one is a member of the American Institute of Architects. This latter architect will certainly ignore any competition scheme, and it is probable that the two others will take the same professional view that all architects do in regard to competitions, that they are, at best, unprofessional, and that the best architectural talent can only be secured through selection. Nothing but the best should find a place in this exhibit of the best architectural talent of the country, particularly as this building should show the advance made by women in the architectural profession.

Fifth Annual Convention, N. A. B.

The fifth annual convention of the National Association of Builders, which was held in New York City, February 9 to 14, was in several ways the most remarkable in its history. It was the largest in general attendance, the actual work done was the smallest, and the action of the delegates was the most peculiar in regard to the questions brought before them. There were present one hundred and sixty-one delegates from thirty-five cities, from Portland, Maine, to San Francisco, while the list of alternates and visitors made a total of upward of six hundred. The most noticeable feeling that seemed to prevail throughout the deliberations was a disposition to "down" every measure that was proposed or advocated by any prominent member. This was first observed when the amendment to the by-laws, making ex-presidents members of the Board of Directors, was brought up for discussion. Notwithstanding the great benefit accruing to the association by securing to the governing body members who had passed through three years of training, who would always be conversant with the policy of the association and its action from year to year, this was called "establishing an aristocracy," and simply because it was proposed and advocated by those who have made the association the powerful and conservative body it is, it was voted down. This was the general procedure throughout the sessions. It was not from hostility to these men or measures, but simply, as one delegate expressed it, "because we want to show those fellows that they are not going to run this thing as a close corporation, but that we are the people." It is fortunate that this disposition did no permanent injury, but we speak of it to show the utter folly of the logic that an owner of a ship follows when he takes the helm, the first time, perhaps, he has ever been aboard a ship, just to show the pilot that he is the owner. The association ship is on the high seas and such action is not at this stage especially dangerous, but if persisted in would be detrimental to the grand work already commenced, and by persistent, intelligent effort can be accomplished. One great good can come from this, however, and that is, continuing our simile, if the owner, the members of local exchanges, will study navigation. This is what they will not do, however. They will hardly attend regular exchange meetings or read the circulars sent out by the national secretary, but when they meet in convention they will assume an equal knowledge with those who have given months of time and study to association work. Another measure was voted down that should have been passed, and this was done through a simple ignorance of the subject. This was a resolution indorsing the endeavor of architects to become professionally recognized by state legislatures. Notwithstanding the fact that any good and honest contractor wishes to work under a capable architect, and large losses are sustained each year by contractors through irresponsible architects, this measure, which was a simple indorsement of a general movement, and involved no responsibility on the part of the association, hardly received respectful recognition. Perhaps the most injurious measure passed was that upon arbitration. A year ago at the St. Paul meeting a definite, dignified stand was taken upon the labor question, and a definite policy outlined which, being transmitted to the local exchanges, has become their policy, and measures have been taken to carry it out. Now this is changed in several of its most vital points, and the entire system altered, and that probably not through any deliberate wish to revoke what had already been done, but through thoughtlessness. This association, representing the builders of the greatest building country in the world, have a responsibility only second to that of our house of representatives. The association has grown fast; the questions that it is suddenly called upon to decide upon are not those of a day, although they may be of the day. They have been growing through the years with the growth of the country, many of them are foreign, and do not belong to our economic system, and a European argument is used for an American question. Then again, the delegate who stands first, perhaps, among his fellows in his local exchange for business ability, is too apt to forget upon the floor of the national assembly that there are other conditions involved than those within his experience. The gentleman from San Francisco who advocated a change in the Uniform Contract, because the builders there all indorsed the one in vogue, but which architects refused to indorse, was probably a good business man, but he did not rise beyond the local feature of the matter into the breadth of its national aspect.

The N. A. B. Interest in Trade Schools.

One great good accomplished, one that justifies the existence of the National Association of Builders and made the late meeting one that will be great in future results, was the practical instruction in the trade school system received by every delegate. It has already been seen by the best minds in the association that it is in the education of workmen that they can accomplish the most permanent work. Out of the five days devoted to the convention, a day and a half was given to the inspection of the trade school systems of New York and Philadelphia. Each delegate will go home with the possibilities for establishing a trade school in his own city fully outlined in his mind, and whether by private enterprise or as a department in the public schools, trade education will advance and the largest factor in this progression will be the work of members of the National Association of Builders.

A New Disinfectant for Walls of Sickrooms.

The *Wiener Bau-Industrie Zeitung* is responsible for the statement that rubbing the walls of a sickroom with fresh rye bread not only removes dirt and stains, but also eradicates all disease germs and adhering seeds of contagion. It mentions experiments with rooms which had long been occupied by patients with contagious maladies. After a single careful rubbing, three out of twelve walls were found free from germs; after a second treatment, every wall was pronounced clean and disinfected. The process is very cheap, both in material and in the fact that unskilled labor can apply it. An ordinary room, about 10 by 16, the walls of which were estimated to harbor nearly one million disease germs, was cleaned completely with about 60 cents worth of bread.

System in Architects' Offices.*

BY H. E. PERKINS.

THE type of monasteries built in the ninth century in St. Gall, Switzerland, is best studied from an ideal plan which happens to have been preserved in a monastic library. "The plan," says Fergusson, in his history, "does not pretend to represent any particular establishment, but is a project of what was then considered a perfect monastery." It represents the ideas and possibilities of that time better than any building could have done, because of its freedom from the limitations which always come in actual execution; so, in formulating such a system as might be used in the administration of an architect's office of today, let us imagine that we are in an ideally-managed office, instead of in one in which we happen to be acquainted.

System in all business is the combining of many instrumentalities so that they act for one result. It is dividing the effort necessary to produce that result into many divisions and keeping them in harmony and in constant motion.

In an architect's office, the result desired is the successful guidance of building operations. The primary instruments are plans, specifications, contracts and superintendence. The people required to produce these are planners, designers, engineers, general draftsmen, tracers, clerks and experts in many branches—so many that some organization or system is absolutely necessary. The fact of many workers at once creates the demand for a recognized system through which everything is governed.

We will limit our study principally to large offices, and so the idea which we will select will be an office in which a very large business is done. It is not to be inferred that the principles which we may see do not apply with equal force to small offices, the only difference being the combining of many minds in the large offices, whereas one man would have entire management in a small one.

Let us follow, at the risk of monotony, the course of a set of plans through this office, and see just where the application and need of systematic procedure exists.

The client comes in and states his case—gives the size of lot, its location, and purposes for which the building is to be used. Small scale sketches are made for him roughly, and then carefully; he takes these, presents them to capitalists and places his stock. This done, he returns sketches. They are reproduced in ¼-inch scale, the general draftsman taking charge at this point, starting out by demanding a survey of the lot, if it has not been delivered. Party-wall diagrams are then made, showing the wall that our client's interests may demand.

The client, with these diagrams, after tedious working, effects a party-wall agreement. The general draftsman can now go on and finish his ¼-inch scale drawings and scale details of finish. The details of the plan are studied and revised daily. The designer makes larger studies of the elevations and his assistant reproduces them in perspective; from this they are revised again and again. When finally decided, the general draftsman is at liberty to finish; he, in turn, has two or three assistants and a corps of inkers. All this time the engineer has been working on the framing plans, studying floor beams, columns, walls and foundations, and one of his assistants is assigned to this building and he conducts this portion and keeps his helpers busy. At the same time, notes are being taken for the specifications by the general foreman of the office. He gathers from owner, architect, designer, draftsman and many others, all special points to be taken care of in the specifications, and adds such others as custom and construction always require. These are given to a specification writer, whose duty it is to rearrange the notes and constantly check them with the drawings, making his preliminary specifications before the drawings are finished, which are read and checked by all parties who are concerned or have given directions for them. After this gauntlet is run and the plans are finished, the final copies are made. The plans are copied, and invitations are sent to contractors to make estimates and bids upon the work. The estimates show that the building will cost more than the owner was willing to pay, and the process of cutting down is next on the programme. When the proper figure is reached the contracts are let and work commences. Before this the superintendent has been appointed. He has received his set of plans and specifications and compared and checked them. He has made up his procedure schedule, made his plan for allotting space to various material men, etc.

As soon as it is decided that the building is to be erected, the general draftsman and his assistants start the full-size detailing. The contractors have received their drawings, specifications and details, and all points which could not have been foreseen are settled or illustrated by drawings made as they are needed. Work progresses, certificates are issued for eighty-five per cent of work actually done, and a final certificate given after all work is finished. The final examinations by owner, architect and superintendent are made, omissions and faulty work are rectified, the last payment made, the architect's final bill rendered and paid. Then the architect's work is done.

Now, let us recapitulate. The client comes in, states his case, and sketches are made for him to use in placing stock, arranging with tenants, etc. No system other than using the knowledge of planning and designing, which the architect, of course, has, is used here. But as soon as they are returned the first grand step in systematic management comes in, that is deputization—deputization of all specialties to specialists; the allotment of general work to a general draftsman; the framing to an engineer; the plumbing and sewerage to a sanitary expert; the ventilation to another; the machinery and electric plant to others. An architect having a business large enough to demand the services of all these will have his entire time taken up with business outside of office management; so, to make it possible to control all these experts, he employs a general foreman, who calls upon and deals with all of the specialists and helpers—a man who really does no part of the work himself, but simply stands and delivers and becomes the tangible head. It is, of course, incumbent upon him to keep his machine in working order, and so the engagement of all, except the principal experts, is in his hands, and all details of the office system are worked out and applied by him. Clients, after their work is started, do their business with him, and superintendents report to him. He is expected to be informed about all work, whether in the office or in construction. He stands as the key to the situation, and has no architectural or technical function. He becomes unpopular with the draftsmen because he is continually asking them to hurry, when they want time to study their work. He becomes unpopular with the clients because he does not produce plans and estimates at whatever date may suit their convenience, quite regardless of the possibilities in the case. He becomes unpopular with everybody whose highest expectations are not realized, and all the while must be perfectly cheerful and courteous, and take all the hard knocks for the whole system quite as a matter of course.

The qualifications of the other members of our system are special only concerning the ability of each to do his work, and do not enter into this discourse. They are the tools and not the creation of system.

The foreman having a large area in the drafting room at his disposal has divided it up in stalls, each one of which has a window. A general draftsman has one of these stalls assigned to him. It is large enough to accommodate an assistant, and is arranged with partitions at front and back upon which drawings for reference may be placed. These partitions also serve to give the privacy which draftsmen need in studying their work. A room entirely separate is devoted to the specification writer, and a second one to the engineers. The foreman has a business office, situated so that the public can reach him easily without entering the drafting room, and also so arranged that he has control of the drafting room at all times.

We next notice the manner of copying drawings. We observe that no one system is used exclusively. One of the most pressing requirements of system is *speed*—and this is best obtained by use of the hektograph process for copying. As everyone knows, the original is inked in in various colored aniline inks, the sections are all colored in aniline colors, and the original when finished is taken to the pad and from twenty-five to forty copies are struck off within an hour. This process is invaluable for the work of estimating. The specifications are duplicated many times, and with these it is possible to have twenty or more contractors estimating at one time. Hektographs do fade on the building, but they are cheap, and extra copies are made to cover this contingency. The hektograph is not accurate enough for the framing plans, so the old blue-print process helps out here. Figures are never caught on top of a bubble, and one knows that everything that was on the tracing is sure to be on the blue print. Inasmuch as the engineer's originals are on tracing cloth, the argument that there is one more chance for error in the tracer does not obtain here.

The auto-copyist process is used in many cases, but it has no particular merits that the hektograph does not have, and has the one demerit that its sheets must necessarily be small, and in our ideal office the buildings are so large that large sheets are required.

Recording the plans is another important cog in our wheel of system. The general set we notice is numbered beginning at B for basement and F for foundations, and then 1, 2, 3 and so on until all drawings in the general set are numbered; then several numbers are skipped, and at fifty, for instance, the framing plans begin. They go perhaps to seventy-five, and at eighty the plumbing diagrams begin, at one hundred the steam diagrams, and at one hundred and twenty-five the full size details which go on to the end; the one point being that no two drawings, no matter how different they may be in character, carry the same number. A book is kept in which all these numbers are recorded and with them the title of the drawing, the draftsman's name that made it, its date, the number and kind of copies that were made of it, and the drawer or box number where the drawings may be found. The clerk in the contractor's room has the companion book to this—the delivery book. In it he records the date at which the drawings or specifications go to various contractors or owners. There is a space in this book for signatures, and whenever practicable the recipient signs in this book, showing conclusively that he has a certain set of drawings or specifications, and date at which he got them.

Closely allied with the recording of drawings comes the very annoying one of filing, annoying because it is so rarely well done—and a drawing may as well be in the bottom of the deep sea as to be incorrectly placed in the files. But we are visiting an ideal office and of course these files are perfect. We notice that the general sets are fastened together between two sticks which project at each end far enough to be put upon racks made for the purpose. Hanging as they do the drawings never become folded and creased nor rolled up and hard to examine, and if the filer has been careless and put a drawing in insecurely it falls on the floor and is noticed and remedied at once. The details are filed in boxes lettered so as to indicate their contents. The vast pile of extras and old originals are filed in much the same manner, every roll having a tag at the end telling its character.

In a vault quite out of the way all drawings of buildings completed are filed alphabetically. The specifications are filed in the same manner. To make all these filing racks and vaults accessible, com-

*Paper read before the Chicago Architectural Sketch Club, February 9, 1891. Revised by the author for THE INLAND ARCHITECT.

plete diagrams are made and constantly revised. These diagrams explain the filing so that anyone can get a drawing without the assistance of the filer.

We need not enter the library at this time. Libraries are aids in studying schemes and designs, but their application is individual. It is sufficient to say that no office system can be well managed without a well-equipped library.

"I will write you a letter and that will make a record of it." This is a sentence you hear a dozen times a day; it indicates the value of recording everything. In our ideal office it is possible to refer to the journals and letter files and establish the date and the details of every order or direction given or received in the entire progress of the building. Herein we notice one of the greatest differences between the ideal and the real architect's office.

In the same preservation of records come the superintendent's journals, in which are recorded from day to day the progress in detail at each building with special reference to delays, strikes, and all matters which may influence the time clause in the contract. Their books are accessible to the office and can be referred to at any time.

The department of contracts is of course managed legally, and absolute precision is taken in it. Contracts are signed in triplicate, the owner, architect and contractor each having a copy. In order that there may be no dispute as to what drawings are referred to in the contract, the signature of the contractor is attached to the original specification and the office set of plans, both of which are imperatively kept within the office, never going outside.

All of the cardinal business virtues, such as promptness, accuracy and fidelity are essential to the smooth working of any system. And this brings us to the last feature, which, like all others, is absolutely essential in our system. It is the proper attitude of the draftsmen and specialists toward the system. In no place does a draftsman find so much responsibility thrown upon him as in one of the leading positions in such an organization as this — the greatest care, constant checking, revision and comparison must be given by him — and he must not allow his position of authority and responsibility to abuse him of the fact that he is but a part of the whole, and that absolute subordination and the receptive mien are expected of him, contradictory as that may seem. A willingness to take things as they are given without stopping to investigate, and at the same time an alertness which will detect every flaw and bring it up for consideration; a determination to become thoroughly informed of everything concerning his building, and an ability to get that information without intrusion or self-assertion; a power over his subordinates to keep them serene and hard at work; a knack for giving hints and instructions to his helpers, making examples of cases as they come up, without interfering with the progress of business; all these and many things besides are to be expected of him who would be a leading draftsman in our ideal office with its systematic organization.

DISCUSSION.

At the conclusion of the paper the arrangement of the drafting room and division into stalls was discussed by most of the members present, one stating that he had recently been in conversation with an architect whose ideas were that an architect's business was to be run either on the art basis or on the business basis. If on the former, stalls would be consistent, giving time and privacy to the artistic draftsman; but if it were to be run on the business basis, he considered stalls a mistake. If the foreman was to have absolute control and be able to see all draftsmen at once, he would not want them to be hidden behind stall partitions. Another member spoke of the great advantage of privacy, stating that in an office in which he had worked the ends of stalls as well as the fronts and backs were partitioned, and that the foreman would take the owner to the front of the stall and get such drawings as he wished to see from the draftsman through a small opening in the front partition, showing it to the owner on a table outside and allowing the draftsman to go back to his work immediately, and not be disturbed by the conversation. The use of stalls or their disuse as a matter of discipline to the draftsmen was considered trivial, it being recognized that a shiftless, idle draftsman would be of no use under any circumstances, and that an industrious one would work as well in a stall as in an open room, so that the subject narrowed down to the one of convenience to the draftsmen, and it was considered that stalls were the most convenient arrangement that had yet been devised.

It was agreed generally that neither system exclusively would do, that stalls had their very legitimate uses, but that a large area was also required for tracers, detailers, and helpers of various sorts. It seemed to be especially essential that the engineer and chief designer be separated not only by stall partitions, but by separate rooms. One member suggested a plan which, although not practicable in city office buildings, is worthy of note. It consisted of a circular room large enough to allow transaction of ordinary business. From this room, with radial partitions were to be located what might be termed outer drafting rooms. Beyond these, making a second tier of small rooms, would be provided rooms for the draftsman, he having his helpers in the room between his own and the general room, thus combining the benefits of privacy and isolation with the usual examination of drawings by all parties at all times. An office was described in which there were two tiers of stalls, one above the other, this being a good scheme where space is limited. Several members seemed dismayed by the too business-like organization for what they considered should be the artistic studio, and thought that architecture was degenerating into a plan factory. The answer which was made to this was, that a study of system was necessarily business, and that the realm of art, the indispensability of which everyone recognizes, need not be considered here; but it was stated that a well-organized system which would reduce all friction to a minimum would, in the most effective way, help the designers to become unconscious of the requirements of business and devote themselves to their ideals. It was humorously asked by one of the members, "what has the architect to do with all this, is he at all concerned or influential in all this system?"

It was stated in the paper that all this work was done under the architect's constant inspection and revision, and it was assumed that the sketches which were originally made for the buildings were sufficiently complete to confine the work of the draftsmen to the original intent of the architect. It was also stated, in answer, that this was a discussion of system of management, and it was assumed that everything is done under the leadership and constant inspiration of the architect, whom every draftsman follows.

Notes from French Exchanges.*

THE COUR DES COMPTES RUINS.

A ROMAN amphitheater of solid construction with its rows of stone seats, or a medieval castle with its massive walls, may be picturesque even if in fragments and overgrown with ivy, but for a comparatively modern building to pose as a first-class ruin is hardly satisfactory. Light construction and veneered walls are not apt to be so safe but that they have to be surrounded by high board fences, and even when they are profusely decorated either with the cold "post no bills" or with the warmer theatrical announcements, they do seem to appeal to most minds as something thoroughly picturesque and artistic that should be preserved at all expense.

Such, at least, has at length become the opinion of the official mind at Paris, as noted in a long article in *La Semaine des Constructeurs* of December 13 — apropos of the Cour des Comptes. Of all the buildings destroyed by the Commune twenty years ago, this is about the only one whose ruins have been allowed to stand as an eyesore to the public. But at length something has got to be done, and the question has arisen as to what shall be built upon this spot? To entirely destroy these remains of Louis XIV's time, to build apartment houses as on the quai Voltaire, with shops and cheap restaurants on the ground floor, would indeed be a great pity, and the society known as the Friends of the Paris Monuments is bestirring itself to, if possible, avoid this.

In the eighteenth century ruins were especially built in the parks, as shown in the Park of Monceau, at the Trianon of Versailles, etc. Let us then strengthen and rebuild some portions of these ruins. It will not cost an enormous amount to do it, and then fill them with the historical débris which now encumber the cellars and lower stories of many of our museums. There are still fragments of the Tuileries and of the old Hotel de Ville, which would here find a proper resting place.

Even if this building were to be rebuilt at a great expense for some of the higher courts of justice, still by the very force of circumstances and its location it must sooner or later be turned over to the grand national museum of the Louvre, as has already been done with some portions of the Tuileries.

Thus there would seem to be no economy in rebuilding for the judiciary at this location, while certainly the complete destruction of the building would be most regretable from all points of view.

FRENCH PRESS CRITICISMS UPON THE ÉCOLE DES BEAUX ARTS.

The École des Beaux Arts has recently been anything but tenderly handled by the artists and French press, and the calm of that institution has been so greatly troubled, that in consequence some decided changes will probably be shortly inaugurated in the government of the pupils. As is well known, the system of hazing and fagging exists to a most disgraceful degree at the school, not only in the studios of architecture, but in even a worse degree in those of painting and sculpture. The authorities, while knowing this full well, have always closed their eyes to the fact, and any complaints have hitherto been worse than useless; but now affairs have been brought to such a pass that evidently something will be done to correct at least in a moderate degree this crying evil.

A *nouveau* in one of the painters' studios, refused to submit with resignation to these imbecile pleasantries and a veritable free fight seems to have taken place. According to *La Semaine des Constructeurs* of November 22, this gentleman, not having the same ideas as his fellow pupils who considered such horse play as inseparable from a good art education, he threw himself into the arena, armed with a stick of wood, and a general melée ensued; someone had a head-dress of a bottle of glue given him; the model escaped clad in nothing but his own loveliness, and the battle raged fiercely until the unfortunate knight was knocked down, pounded and stamped on, and so badly injured that he was removed in haste to the hospital. Fortunately, his wounds though severe were not fatal, but he and his friends threaten to take the affair into the courts, with criminal proceedings against the pupils and authorities.

L'Immeuble of November 9, in a strong article upon this subject, says, "A high functionary of the school, probably M. Destable, was interviewed and said that these things were only 'pleasantries,' possibly a little rude but inoffensive. It will be acknowledged that this manner of treating a veritable battle, where the victims are obliged to be cared for at the hospital, is decidedly cavalier."

It is not only in the ateliers of painting that such scandalous scenes take place as the above. For example, a short time since, a visitor going to one of the public exhibitions at the school, missed his way and was surrounded by the scholars of one of the architectural studios. Water was thrown over him until drenched, and he was

*Translated and arranged by W. A. Otis for The Inland Architect.

even kicked and beaten, and finally had his own umbrella broken over his back.

The victim complained to the police and the next day that studio was closed. Of course the authorities suppressed the affair. As for the *gardiens* paid to watch the ateliers, they have the beautiful habit of never setting foot inside of the rooms, for they well know that they will be knocked down if they have the imprudence to do so. In the ateliers outside of the school such a state of affairs does not exist, neither would it be tolerated.

The day after the fight the Bonnat studio was closed by the school authorities for three months, and, besides, four pupils, the leaders in the disturbance, were suspended for periods varying from one month to four years. So much has public opinion been stirred up that the question of entirely closing the studios in the school was discussed, but decided in the negative, although strong measures have been taken to have no similar scandals hereafter.

Pleasanter topics in regard to the school may, however, fortunately be noticed. At present the holders of the grand prize of Rome are only permitted to travel in Italy, Sicily and Greece, but henceforth a greater latitude will be given to the scholars in the choice of works that they must each year send to Paris. To accomplish this they may now visit, besides these countries mentioned, also Spain and Holland.

The question of the admission of women to the school is now being seriously considered by the authorities and will probably shortly be an accomplished fact, although they will undoubtedly have separate studios. Such a step as this is a most radical one for the school, since, up to the present time, the admission even to the lectures of such distinguished men as Taine has been almost an impossibility for ladies. In order to listen to this able man, a woman had first to obtain permission of the Director, then of the lecturer himself; but even this would not permit of sitting in the hemicycle. A small gallery directly over the speaker's head was the only place where such a daring person's presence could be tolerated.

All this promises now to be changed, and the admission of ladies, whether particularly desirable or not to themselves, will unquestionably tend to greatly lessen the "pleasantries" of which the director speaks so lightly.

These numerous questions relating to the École des Beaux Arts give a certain interest to the statistics recently published in *La Semaine des Constructeurs*. The pupils enrolled at the school number 1,053; of these 711 are in architecture, 209 in painting, 119 in sculpture and the remainder in engraving.

According to *La Semaine des Constructeurs*, the sculptors and architects of Berlin are in a somewhat perturbed state of mind, and Mr. Bruno Schmitz, the designer of the Indianapolis soldiers' monument, apparently is taking an active part in opposition to the decidedly imperious method of competition devised by the emperor. At the beginning of the year the Reichstag voted funds for a national monument to Wilhelm I, and a competition was at once opened, free to all architects and sculptors of Germany.

So great was the diversity of opinion as regards the site, that the competitors were given the choice of four different locations in Berlin.

When the designs were presented and it became necessary to classify them in order to arrive at a decision, a second difficulty arose. Should the monument be purely sculptural, or should a design be chosen where the statue of the kaiser had an architectural setting? The emperor decided the question and announced that it was his irrevocable desire that the monument should consist wholly of an equestrian statue of his grandfather, and that it should be placed at a certain point indicated by him. Nothing remained but to bow to this decision, and from that time the affair was under the direct personal inspiration of the ruler.

A second competition was opened between eleven artists. The letter of invitation was at least explicit. A remuneration of $1,000 was offered to each of the artists in exchange for all his rights in the design which would, when thus acquired, become the property of the state; besides, $3,000 in prizes would be distributed to the best designs, but as regards the judges of the competition, not a word. This invitation was not accepted without reserve by certain of the competitors sufficiently independent in their position to manifest their sentiments. Seven of them, among which was Mr. Schmitz, signed a protest in which they demanded, first, the names of the members of the jury; second, the assurance that the designs presented would be publicly exhibited; third, the assurance that the author of the design given the first prize should be given the work.

The response to this protest informs the signers, upon the order of the emperor, that he could not accede to the second of their demands, and the artistic world is now waiting impatiently to know what action the protestors will take.

THE Lecture Association of the University of Pennsylvania announce a special course of illustrated public lectures by Mr. Barr Ferree, of New York, on February 12, 17 and 19, on the Influence of Christianity on the Development of Architecture. These lectures, which will be three in number, will treat of (1), the Basilica, the Formative Period of Christian Architecture; (2), the Cathedral, the Perfected Form of Christian Architecture; and (3), the Monastic Orders, the Greatest Christian Builders. They explain the meaning of architectural forms as interpreted by forms, ceremonies, doctrines, etc. Special stress is laid upon the influence of the monks on the progress of architecture, and their influence for good in the troublous times in which they lived. All the lectures will be superbly illustrated from views prepared especially for this course.

Architecture.*

BY MONTGOMERY SCHUYLER.

MR. CHAIRMAN and Gentlemen of the National Association of Builders assembled,—You will not expect from me, in responding to this toast, any exhibition of that facetious spirit with which some of my predecessors have entertained you. It has indeed been said that American humor has never found full expression except in architecture. It has also been said by an honored friend of mine, himself an architect, whom I hoped to see here tonight, that American architecture was the art of covering one thing with another thing to imitate a third thing, which, if genuine, would not be desirable. (Laughter.) But I hope you will agree with me that, though the expression is comic, the fact, so far as it is a fact, is serious even to sadness. It is a great pleasure and a great privilege for me to speak to this sentiment, and it is especially a privilege for me to speak upon it to an association of builders, because it seems to me that the real, radical defect of modern architecture in general, and perhaps of American architecture in particular, is the estrangement between architecture and building, between the poetry and the prose, so to speak, of the art of building, which can never be disjoined without injury to both. If you look into any dictionary, or into any cyclopedia under "architecture," you will find that it is the art of building, but I do not think that you would arrive at that definition from an inspection of the streets of any modern city. I think, on the contrary, that if you were to scrape down to the level of the main wall of the buildings of these streets, you would find that you had simply removed all the architecture, and that you had left the buildings as good as ever; that is to say, the buildings in which the definition I have quoted is illustrated are in the minority, and the buildings of which I have just spoken are in the majority, and the more architectural pretensions the building has the more apt it is to illustrate this defect of which I have spoken.

It is, I think, historically true, in the history of the world, with one conspicuous exception, that down to the Italian Renaissance, some four centuries ago, the architect was himself a builder. The exception is the classical period in Rome. The Grecian builders, as all of you know, had taken the simplest possible construction, that of the post and lintel, two uprights carrying a crossbeam, and they had developed that into a refined and beautiful thing. The Romans admired that, and they wished to reproduce it in their own buildings, but the construction of their own buildings was an arched construction; it was a wall pierced with arches. They did not develop that construction into what it might have been. They simply pierced their wall with arches and overlaid it with an envelop of the artistic expression of another construction, which they coarsened in the process. According to some accounts, they hired Greek decorators to overlay it with this architecture, which had nothing to do with it, and there was the first illustration in all history of this difference between the art of architecture and the art of building. In every other country in the world the architect had been the builder. I think that is true down to the Italian Renaissance, and then building was really a lost art. There hadn't been anything really built in the fifteenth century, and they began to employ general artists, painters and sculptors and goldsmiths to design their buildings, and these men had no models before them except this Grecian-Roman architecture of which I speak. These men reproduced that in their designs and left the builder to construct it the best way he could, and that, I am told, is a process which sometimes prevails in the present time. But before that, everything had been a simple development of the construction and the material of the building, and since that, men have thought they perceived that architecture was one thing and building was another, and they have gone on to design buildings without any sort of reference to the materials of which they were composed, or the manner in which they were put together. That is the origin of the exclusively modern practice of working in architectural styles, as it is called. Why, before the fifteenth century, I don't think any man who began to build a building ever thought in what style he should compose it any more than I thought, before I got up here, in what language I should address you; he simply built in the language to which he was accustomed and which he knew. You will find this perfect truth is the great charm of Grecian architecture, and ten or fifteen centuries later it was the great charm of Gothic architecture; that is to say, that it was founded upon fact, that it was the truth, that it was the thing the man was doing that he was concerned about, even in those pieces of architecture which seem to us the most exuberant, the most fantastic, like the fronts of Rouen, or like the cathedral of which Longfellow speaks, as you all remember:

> "How strange the sculptures that adorn these towers,
> This crowd of statues, in whose folded sleeves
> Birds built their nests; while, canopied with leaves,
> Parvis and portal bloom like trellised bowers
> And the great minster seems a cross of flowers."

Even in those things there was that logical, law-abiding, sensible, practical adherence to the facts of construction, to the art of building, which we have so long lost, and which I hope we are getting back again.

There are examples in the work of our modern architecture of architects who design with this same truth, with this same reality, with this same sincerity that animated the old builders before the coming in of this artificial and irrelevant system of design, and one of them is the building in which I am informed a great many of you spent last evening; I mean the Casino. I don't know any more admirable illustration of real, genuine, modern architecture than that building, and among all its merits I don't know any merit greater than the

*Speech delivered at the fifth annual banquet of the National Association of Builders, at the Lenox Lyceum, New York, January 12, 1891.

fidelity with which the design follows the facts of structure in the features, in the material, in everything. It is a building in baked clay; there isn't a feature in it in brick or in terra cotta which could be translated into any other material without loss. It is a beautiful, adequate, modern performance. I say this without any reservation, because, unfortunately, the genius who designed that building has gone from us; and there are many things by living architects whom I cannot mention, because they are living, which exhibit these same merits. There is one other example that I would like to mention here because many of you know his work; I mean the late John Wellborn Root, of Chicago. (Applause.) I shouldn't mention him, either, if he hadn't unfortunately gone from us. Mr. Root's buildings exhibit the same true sincerity, the knowledge of the material with which he had to do, the fulfillment of the purpose which he had to perform. I don't know any greater loss that could have happened to the architecture of this country, and to the architecture of the future, than that man dying before his prime. (Applause.) These are stimulating and fruitful examples to the architects of the present time to bring their art more into alliance, more into union, more into identity with the art of building; and it is by these means, gentlemen, and by these means only, that we can ever gain a living, a progressive, a real architecture—the architecture of the future.

Illinois Chapter of the American Institute of Architects.

THE regular monthly meeting of the Chapter was held at the rooms of the Institute of Building Arts, 63 and 65 Washington street, Chicago, December 15, 1890. Dinner was served at 6:30 P. M., and the meeting called to order at 8 P. M., with President Shipman in the chair, the following members being present:

John W. Root,	W. J. Edbrooke,	O. J. Pierce,
John Addison,	August Fiedler,	S. M. Randolph,
D. Adler,	Fritz Foltz,	L. J. Schaub,
Frederick Ahlschlager,	H. L. Gay,	S. V. Shipman,
Frederick Baumann,	L. G. Halberg,	Alfred Smith,
George Beaumont,	C. O. Hanson,	J. L. Silsbee,
Myron L. Beers,	H. W. Hill,	C. L. Stiles,
W. W. Clay,	W. M. Otis,	S. A. Treat,
L. D. Cleaveland,	A. F. Pashley,	Greg Vigeant,
L. B. Dixon,	N. S. Patton,	C. J. Warren,
	J. R. Willett.	

After the minutes of the last meeting had been read and approved, the secretary read a communication from the secretary of state of Illinois, officially approving of the addition of one member to the Executive Committee, that of second vice-president. The wording of this communication not being correct, it was moved that the secretary return same for correction, which was duly seconded and carried.

Mr. Otis offered the following resolution, with regard to rules of management of the Institute of Building Arts, seconded by Mr. Adler and unanimously carried:

Resolved, That the control of all business of the Institute of Building Arts is vested in the Executive Committee of the Chapter by virtue of Article IV of the By-laws, and all its business shall be transacted in the name of the Chapter.

The direct management of the Institute may be delegated by the Executive Committee to two trustees appointed by said Executive Committee.

All funds collected shall be turned over to the treasurer of the Chapter, and all disbursements of moneys shall be made by him, as per Article IV of the By-laws.

And furthermore, be it resolved that no profits arising from the Institute shall be distributed to the individual members of the Chapter. But whenever in the judgment of the Executive Committee a sufficient sum of money, beyond a necessary reserve fund for running expenses, shall have accumulated from said profits of the Institute and other sources, then said money or parts thereof, or the interest thereof, shall be devoted to promoting the general welfare, influence and advancement of the architectural profession. This shall be accomplished especially by means of lectures, technical instruction, building experiments tests of soil and materials, increase of library, a permanent building fund and by any other methods deemed desirable for attaining the end in view, namely, the general good and advancement of architects as a body.

Mr. Adler then addressed the meeting, as follows:

MR. CHAIRMAN AND GENTLEMEN,—My unwarranted assumption of authority in issuing to you the peremptory summons to appear here this evening will need no apology, if you are as well pleased at seeing and meeting one another as I am to see and meet you all this evening.

My purpose in making this unusual effort to secure a full attendance at this meeting, was that I wished to interest as large a number of our membership as possible in the initiation of the movement that I am about to propose to you.

You are well aware of the fact that there will be here, in the summer of 1893, the World's Fair, and as citizens of the United States we owe it to the world, and as citizens of Chicago we owe it to the United States, and as architects we owe it to our fellow citizens and our fellow architects, here and throughout the world, to do all in our power to make this fair an unqualified success. Should this fair in any sense fail to come up to the expectations of the world, and to the promises of its projectors and managers, the disgrace will be not merely that of the projectors and immediate managers, it will be the disgrace of the entire country, the disgrace of our city; and we, as architects, will be called upon to take our full share of the responsibilities for the failure. The loss of prestige which will be suffered by our country, and by our city, will reflect upon us, not merely in a sentimental way, but also tangibly, as an injury to our professional and business interests. And the greater the success of the fair, the greater the triumph of our country, the greater the prominence of our city. Our material interests are so closely interwoven with those of the community of which we form a part, that with the augmentation of the fame of the city, will come a rise of our own standing as a most essential factor in the growth and development of that city. If the millions of visitors, who will come to the fair during the summer of 1893, see that the fair itself is a success, they will be pleased, not only with the fair, but with all they see of Chicago, its buildings and its people. The professional standing of every architect in Chicago will be raised, and his opportunities for becoming a factor in the architectural development, not merely of this city, but of the entire country, perhaps of the entire civilized world, will become greater as the success of the fair becomes more and more emphatic.

If, now, we can cause to be incorporated among the various departments of the fair one that shall be under the fostering care of the architects of Chicago, and of especial interest to the students and practitioners, to the amateur and to everyone interested in the progress of architecture, of building and of kindred arts and sciences: if we can cause the organization and management of such department to be one of the more prominent and one of the most successful features of the fair, then the architects of Chicago will enjoy the direct advantages accruing from the success of their own initial and individual action in addition to the reflex benefits that will accrue to them in a general way from the general success of the entire undertaking.

What I would propose, therefore, is that there be instituted a department in the Columbian Exposition which will illustrate the progress of architecture in the different countries, from barbarism to the present day. It will probably be found inexpedient to form this on lines identical with those pursued by Mr. Garnier, in his "Parallel Habitations of Man," and so, perhaps, have this part of our exhibit take a wider scope and embrace everything in the nature of buildings devoted to the uses of man, but more particularly the more ambitious and monumental structures in the world, of which models made to uniform scale, similar to those now forming the Willard collection at the Metropolitan Museum of Arts, at New York, might form a nucleus, and which collections of models should embrace, for the purpose of comparison, every noteworthy building of the world, and of the past and present. Of still greater importance, to my mind, would be an exhibition containing specimens of handicraft work of all peoples and all ages, from the earliest dawn of civilization to the present day; these, arranged in chronological order, and on such lines that the progress from time to time, and the status in the different times of the handicraftsmen of different peoples could be readily compared. This would naturally lead to a very extensive exhibit of the artistic handicraftwork of the present day, whether in stone or in wood carving, in blacksmith work or *repoussé* work; and, in short, art decorative work of every kind and in every material, as produced in every country of the world at the present day. Such an exhibition would, therefore, have a two-fold value: first, in illustrating the progress of man from barbarism to the present day; secondly, in giving us standards for comparison for the still further improvements in the work of the present day.

A further field for that exhibition would lie in the direction of exhibits of machine-made products used in building, and possible illustrations of the machines producing them, and certainly working models of the manner of using the many materials and processes at the service of the American and European architect of today. I would illustrate American methods and processes of construction from the log hut and balloon frame to the steel skeleton fireproof building of the present day, and would illustrate every method of efficient, cheap construction, the various methods of slow-burning construction, and the most approved methods of fireproof construction that we know of in this country and recently known in Europe.

Again, in connection with the exhibit of building materials and appliances, might be included an exhibition of testing machines. Of these, the best known to the world are made in America, and with these could be conducted, upon stated and widely announced occasions, public tests of the many materials of construction.

In short, I would have this department of the great exhibition cover everything concerning the student of architecture as an art or as a science, or the practicing architect or builder, or the actual or prospective owner and erector of buildings, every amateur, every lover of art and its progress, and every one who has occasion to live in, work in, or do business in a structure erected by architects, and this would embrace every civilized being.

There will be during the year 1893 a convention of the American Institute of Architects, which would probably be held at Chicago. If at the same time there could be arranged a congress of the architects of the world, and if this special exhibit could be made particularly interesting to the participants in this congress, the result would be of incalculable benefit to our country, to our city and to our profession.

I do not think that we need fear the burden of excessive expense, for I cannot but believe that the directors of the fair will see how great are the advantages that will accrue from the carrying out of plans similar to what I have outlined, and that they will lend us all assistance in their power. I am further of the opinion, that if it once becomes known how complete and perfect, and how interesting we may make the architectural department of the fair, that exhibitors will crowd in upon us, perhaps in greater numbers than we can care for, and that they themselves will to a great extent bear the brunt of the expense. But even if we shall ourselves be called upon to contribute our share toward defraying expenses that cannot be met from other sources, we should not hesitate for a moment to contribute liberally, and to our full capacity. We will receive recompense in many ways a hundred-fold for any outlay that we may incur.

It is necessary that we act soon. A general plan of classification has already been adopted by the national commission and the local directors. It may be that what I have proposed is not altogether in consonance with this plan of classification, but it is yet so early in the history of the enterprise that all plans are still elastic, still susceptible of modification. It is our duty to go quickly and promptly before projects adverse to our own shall have become crystallized into definite form, and therefore difficult of modification.

In view of the fact that individual countries will have their own exhibits, and in view of the still more deplorable fact that the local board will induce individual states and smaller communities of our own country to make their own exhibits, many objects that would be of greatest interest as part of our own collection, will be scattered great distances apart in the wilderness of miscellaneous exhibits. It must be our duty to see to it that if we cannot actually separate every object which it would be desirable to make part of our own exhibit from the country, state or smaller community, we must at least secure a duplicate of the same for our own department.

That all this may be accomplished we must be on the field soon, and I think the proper time has now come for us to assume the initiative. I am not prepared to make a definite motion with relation to this matter. I should prefer to have a free discussion of the same and let any action of this meeting be the outgrowth of such discussion. There are among us this evening several who have seen great exhibitions, who can tell us the result of their observations.

Mr. Root, consulting architect of the World's Fair directory, is also here, and can undoubtedly give us valuable information.

Messrs. Root, Treat, Baumann, Silsbee, Patton, Beaumont and others took part in the discussion which followed Mr. Adler's address, and Mr. Baumann offered the following:

Resolved, That a committee of five (5) be appointed by the president, of which Mr. Adler shall be the chairman, to further consider the feasibility of an architectural exhibit in connection with the World's Columbian Exposition of 1893, and to elaborate a plan of procedure, and, if necessary, the place itself in communication with the authorities of the World's Columbian Exposition, with a view of furthering the interests of such an exhibit.

The resolution was seconded by Mr. Hill, and unanimously carried with the amendment by Mr. Adler, "That the president of the Chapter shall be a member of this committee."

The president appointed as such committee Messrs. D. Adler, S. A. Treat, F. Baumann, H. L. Gay, and the president, S. V. Shipman.

Upon motion, the meeting adjourned.

On January 19, the regular monthly meeting of the Chapter was held at the rooms of the Institute of Building Arts, 63 and 65 Washington street, Chicago.

Dinner was served at 6 P.M., and the meeting called to order at 7:30 P.M., with President Shipman in the chair, the following members being present:

John Addison, D. Adler, F. Ahlschlager, F. Baumann, G. Beaumont, W. W. Clay, L. D. Cleaveland, F. Foltz, H. L. Gay, L. G. Hallberg, A. F. Pashley, C. M. Palmer, N. S. Patton, Henry Raeder, S. M. Randolph, S. V. Shipman, Alfred Smith, S. A. Treat, C. J. Warren, G. Vigeant.

Guests present: Messrs. R. C. McLean, H. W. Perce, P. B. Wight.

Mr. Adler: I think it would be wise, for the instruction of the Chapter and for the information of those not connected with the Institute of Building Arts, to print and distribute in pamphlet form

the resolutions relating to the management of the Institute of Building Arts, and that, with this, be published a statement of the financial progress of the Institute during the time it has been under the control of the Illinois Chapter of the American Institute of Architects, and that this be also published in the professional journals, in the form of a circular letter. Mr. Adler having put this as a motion, it was seconded by Mr. Gay, and unanimously carried.

Report of the manager of the Institute of Building Arts was read by the secretary.

Mr. Treat moved that the president and secretary be authorized to sign, on behalf of the Chapter, a lease for the rooms of the Institute of Building Arts, at 63 and 65 Washington street, Chicago, for two years, at an annual rental of $3,300, payable in monthly installments in advance. This was seconded by Mr. Clay, and, after a careful discussion from various points of view, was finally carried without a dissenting vote.

Mr. Adler moved that the Executive Committee be authorized to prepare a suitably engrossed memorial of the late John W. Root and forward same to his family, and also order the secretary to purchase an official stamp for the use of the Chapter. Mr. Addison seconded this motion, which was carried unanimously, after many expressions of sorrow and regret at the loss by death of one of our brightest members.

Mr. Adler reported progress of the special committee, appointed at the last meeting, for the purpose of consulting with the directors of the World's Fair with regard to an architectural exhibit.

From a discussion upon the subject, in which Messrs. Beaumont, Treat, Clay, Patton, Randolph and others participated, there developed an apparently unanimous desire for the establishment, by the state, of a system of examinations before a board of architects for all persons desiring to enter the architectural profession, and the Executive Committee was authorized to memorialize the legislature, with a view of having a bill brought before the house on the subject of compulsory architectural examinations under state control.

Mr. Patton proposed that, at some future meeting, we discuss the present unsatisfactory sanitary laws in force in this state.

Mr. Clay moved that a committee be appointed to report on a series of tests which shall be made of the most modern sanitary appliances. The motion was seconded and carried by unanimous vote.

The president appointed Mr. Clay, Mr. Patton and Mr. Willett as members of this committee, and, on motion, the meeting adjourned.

Annual Meeting Missouri Chapter A. I. A.

THE second annual meeting of the Missouri Chapter of the American Institute of Architects was held at the Mercantile Club, St. Louis, January 13, 1891. The convention was called to order by President T. C. Link; A. F. Rosenheim, acting secretary, vice E. F. Fassett resigned. The following members were present: T. C. Link, Alfred F. Rosenheim, John Beattie, Thomas B. Annan, Charles K. Ramsey, Edmund J. Eckel, James J. McGrath, Albert Swasey, Charles C. Hellmers, George R. Mann, G. U. Heimburger, C. Kledus; honorary member, R. C. McLean. After the reading of minutes of the last annual meeting by the secretary, President Link addressed the assembly as follows:

GENTLEMEN,—While this is our first convention as a duly organized Chapter of the American Institute of Architects, we meet as practically the same body which has now for the past six years gathered annually in the different cities of our state. We retain under our new name the same aims and objects which called into existence the original state association, and, I am sorry to observe, we have retained also that same old slimness of attendance which has characterized many of our previous gatherings. Now, I have often caught myself wondering why architects as a species seem to avoid such meetings as these, and the most charitable construction which I am able to find for this apparent lack of *esprit de corps* is the fact of a constant necessity to keep one's nose well down to the grindstone year in and year out. We want to be friendly and brotherly and even have a good time once a year; but — we *must* keep that pencil sharpened, or what would the man think who should find us out of town just on the very day he is all ready to start that $2,000 house he has been talking about for four years? Therefore, I have come to this conclusion: that it requires either great prosperity or an awful calamity to bring people nearer to each other.

Since we, as a profession, are not enjoying or experiencing either of these conditions at present we must even remain a seemingly unsociable set of Philistines, and keep on playing at conventions until the next century, which, we are told, will be one of unusual appreciation and prosperity for the profession.

At last year's convention I placed myself on record as being opposed to the abandonment of our state association and formation of a state Chapter of the American Institute in its stead. My experience during the past year has fully demonstrated to my mind how decidedly impracticable this arrangement is, so far as real association work is concerned. Our condition in Missouri is different from that of most other states, in so far as we have two great cities in this state, and the almost entire membership of this Chapter is drawn from these two cities: St. Louis twenty-six members, Kansas City twenty-one members, outside two members. It has been the practice to divide the offices and committees among these two cities, and being nearly three hundred miles apart, it explains itself why during the past year not a single meeting of the Executive Board or of any of the standing committees has been held. Again, of our present membership of fifty-nine, only twenty-two are Fellows of the American Institute, and let it be recorded that not one of the twenty-seven associates has during the past year presented an application for admission into the national association. Now, it seems to me that such a condition of things is against the SPIRIT of the American Institute of which we are part. The local Chapters which exist under the auspices of this national body ought to have a predominating membership of Fellows of the Institute instead of a majority in associates. Therefore, it seems to me that our by-laws ought to be so amended as to compel associates to apply for fellowships in the Institute within a certain time or be dropped. This seems to me but fair and just to the prestige of an Institute which spreads its protecting wings over our heads. I regret to say, therefore, that owing to this condition of affairs which I have briefly outlined nothing whatever has transpired within the past year which might furnish a welcome subject for me to enlarge upon. It simply remains for me to urge upon this convention the necessity of devising a scheme by which this Chapter's usefulness can be made more apparent than it has appeared to me under the aforesaid existing conditions.

The report of the Legislative Committee was called for, and Mr. Rosenheim, as a member of the committee, stated that no progress had been made during the year. The other standing committees, including the Executive Committee, made similar reports.

The resignation of Mr. George Carmen was received, he having abandoned the practice of architecture.

The report of Treasurer Beattie showed a balance in the treasury of $171.37. This report being audited by a committee appointed for that purpose, Messrs. Annan and Swasey, was reported to be correct.

Mr. Illsley reported as a committee to investigate the feasibility of forming a defense club for legal support in collecting claims and collecting legal advice bearing on architectural matters, and recommended that the committee be dismissed. He stated that the plan upon which a similar system was in operation in France was not obtainable, and as the Chapter was not large enough to support such a bureau, it was for this reason alone hardly practicable. The success of the scheme in Paris was probably largely due to the size of the city and uniformity of French laws.

On motion of Mr. Ramsey, the report was received and the committee discharged.

A resolution was offered by Mr. Rosenheim, calling upon all associate members to become Fellows by joining the American Institute within six months or be dropped from the rolls. He explained that he offered the resolution rather to bring the matter up for discussion, it being suggested by the president's address. The line of argument in favor of its passage seemed to be that as the Institute had made membership conditional upon Chapter membership it might be well for the Chapter to anticipate this.

After discussion, in which a general protest against any coercive measure in Chapter affairs, the motion was lost.

Mr. Ramsey presented the following resolution:

Resolved, That it is the judgment of the members present at this convention that the usefulness of the Missouri State Chapter no longer exists; and, therefore, that when an adjournment is made, the Chapter be disbanded, and the amount of cash in the hands of the treasurer be disposed of as follows: first, the debts of the Chapter be paid in full; second, any cash which may be left over shall be divided equally between all the members in good standing.

Mr. Hellmers stated that he was not in favor of the abandonment of the Chapter by any means. That though peculiar conditions existed in Missouri, that for the common good of the future architectural growth of the state and that of the American Institute, of which the state and local Chapters were the life, the Chapter should be maintained.

Mr. Illsley spoke in the same vein and moved that the resolution be referred to a committee of six members, chosen equally from St. Louis and Kansas City, to report at the next annual meeting.

The president appointed as such committee C. Kledus, C. E. Illsley, C. K. Ramsey, E. F. Fassett, G. M. D. Knox, Adrience Van Brunt.

Mr. McLean stated that the lack of interest among members should not be taken as an indication that the Chapter was useless. He was sorry to see a resolution of this kind considered for a moment. No associate members had applied for admission to the Institute during the year because there had probably been an uncertainty regarding their position or the proper procedure. Then, again, it was probable that the president, the secretary and the members of standing committees had each neglected his duty, one member of a committee having not only confessed to absence from the last convention, but had not even read a report of the proceedings, and the secretary had not informed him of his appointment. When lack of progress and vitality was produced by such causes as these the system should not be blamed for it. If the Chapter was abandoned it should be honestly confessed that the members did not care to do the work involved, and not be charged against the Chapter as an institution.

Mr. Hellmers moved that the rules be suspended and that the secretary cast one ballot for the Chapter for all the present officers for the ensuing year. The secretary cast one ballot for Theo. C. Link, president; Alfred F. Rosenheim, secretary; James Beattie, treasurer, and the meeting adjourned to meet at St. Louis the second Tuesday in January, 1892.

The following resolutions were recently passed by the Chapter upon the death of John W. Root:

KANSAS CITY, February 5, 1891.

The Missouri State Chapter of the American Institute of Architects hereby desire to record our sense and appreciation of the great loss to the profession in the death of Mr. John W. Root, secretary of the American Institute of Architects, whose architectural genius and manly character entitle his memory to the honor and respect of all who knew him.

We also tender our profound sympathy to his family and near associates.

G. M. D. KNOX,
F. B. HAMILTON, } Committee.
A. VAN BRUNT,
A. F. ROSENHEIM, Secretary.

The following resolutions were likewise passed by the St. Louis Chapter, American Institute of Architects:

ST. LOUIS, January 27, 1891.

MR. PRESIDENT,—Your committee appointed to draw up appropriate resolutions upon the death of Mr. John W. Root, begs leave to report as follows:

Resolved, That in the recent death of Mr. John W. Root, secretary, the American Institute of Architects and the profession which it represents have sustained an irreparable loss.

That the deprivation of his eminent abilities and service, at this time, connected as he was with a national exhibition and world-wide movement, is a public calamity common alike to true art in America and abroad.

That this, the St. Louis Chapter of the American Institute of Architects, recognizing his genius, his unselfish devotion to the best interests and aims of architecture, and his loyalty to his chosen art, gratefully acknowledges its indebtedness, and pays its tribute to his memory as a man and his preëminence as an artist.

That in the brief span of life allotted to him, few men have climbed with firmer tread or surer vision the steep paths that lead to fame, and fewer still have stood "in that fierce light which beats about the throne," as unsullied and unspotted of the world as he.

Submitting to the decree which has called him hence, we indulge the hope that brilliant as were his achievements here, a brighter immortality awaits him in the fair land beyond the skies.

"Take him for all in all he was a man whose like we ne'er shall look upon again."

That these resolutions be spread upon the records of this Chapter, and a copy of same transmitted to the family of the deceased.

Respectfully submitted,
T. B. ANNAN,
THEO. C. LINK, } Committee.
A. F. ROSENHEIM,

Fifth Annual Convention of the National Association of Builders.

THE fifth annual convention of the National Association of Builders of the United States of America assembled in the Masonic Temple, Twenty-third street and Sixth avenue, New York, at 10 o'clock A.M., February 9, President John J. Tucker in the chair. The president introduced the Rev. Talbot W. Chambers who opened the convention with prayer. The president expressed regret that the mayor of the city, the Hon. Hugh H. Grant, who had intended welcoming the delegates, was out of the city, and addressed the assembly as follows:

PRESIDENT'S ADDRESS.

GENTLEMEN OF THE CONVENTION: It affords me great pleasure, on behalf of the Mechanics' and Traders' Exchange of New York, to welcome you on this occasion, the fifth annual convention of the National Association of Builders, and to extend to you the hospitalities of our city.

Although our association is but a youth, I know you all feel as I do in looking back over its history, that the time has been well spent, and we may be proud of the fruit that has been borne.

Five years ago the acquaintanceship and knowledge possessed by the building fraternity of those engaged in like pursuits, and what they were doing in our sister cities was very limited, and if nothing more has been done than to bring together these representatives from all parts of this broad land, and enable us to form new ties of friendship, a grand work would have been accomplished and well repaid us for our labors.

Our inactivity, or rather lack of concerted action, had permitted many abuses to creep into our business methods and affairs. After organization, among the first things to attract attention was the question of "Contracts," and how could the interests of all parties to the same be equally protected.

A committee was appointed from our body, who met in conference with one from the Institute of Architects, and the result of their deliberation is found in the uniform contract, which, while not perfection is in every way superior to that which existed previously, and has been very generally adopted throughout the country.

The next important question to arouse discussion was that of "Apprenticeship," and how to train our young men to become superior mechanics.

The trade school has been the answer, and it will be the pleasant duty of the Entertainment Committee this afternoon to show you what is being accomplished in this city by one of our philanthropic citizens at his own expense, Col. R. T. Auchmuty.

While New York has her Auchmuty, Philadelphia her Williamson, Brooklyn her Pratt, and other cities whole-souled, generous hearted men who are carefully looking into this subject, the real ones behind the movement should be the exchanges themselves, and I hope and believe that before many years pass by, we shall find in every city a thorough and efficient trade school in operation, under the direction and guidance of the exchange of that city.

Philadelphia is the first in the field, and the success of the undertaking has been far greater than the most sanguine looked for. Let us hope that in the coming year others will be added to the list.

We have under discussion other questions of great importance to this body, and what has been accomplished will be told in the reports of the committees in charge of them.

At our last convention it was decided that it would be beneficial to hold a mid-year meeting of the directors, so that the results of the labors could be more fully discussed and presented than seemed possible by correspondence. This meeting was held, and more than met the anticipation of its advocates, and I think you will decide, after hearing how much value was attached to the result obtained, that it should hereafter be a feature in the movements of the association.

Our association is not intended to be anything more than advisory. The real work must be done by the exchanges themselves. Our main object is to bring troublesome questions under consideration and discussion by many instead of a few, and under the light of thorough investigation, through the friction of many minds, evolve that which is beneficial and good, and eradicate all that is injurious and hurtful to our interests as mechanics and men.

For many years the mechanic, as a member of the community, has not received the consideration that he was entitled to, but we are growing in knowledge of ourselves and each other, and with patient forbearance will ultimately reach the position that is rightfully ours.

I can conceive how we can retard our progress through a blindness to the fact that we have too long neglected our duty in correcting abuses which have become grounded in habit and practice. We must avoid doing and resolving to do things which we are unable to carry out, as failure would only result in ridicule; and also we must be careful not to expect too much until we have so fortified ourselves as to enable us not only to assert our rights, but to maintain them.

In municipal affairs, the knowledge and experience acquired by years of application to our industries should accrue to the advantage of the community and be at their disposal. Has it been so? No! Others incapable, as far as practical knowledge was concerned, have been selected to fill the place that rightfully belonged to the mechanic.

This condition, I am pleased to say, is to some extent changing, and to no small degree it is due to the National Association.

Association or consolidation is the spirit of the hour. We hear of it, not only in all parts of our country, but also from abroad. Much can be accomplished by combined, while individual efforts would only be wasted. Such an association is ours, — and for consolidated action, not for the purpose of forcing a weaker neighbor to the wall, and so absorb all he has, under the principle that might makes right; that sentiment belongs to a past age; but an association of brains and interests, where the strong can help his weaker brother, where the timid and struggling may turn for assistance and feel assured of receiving it; where an injury to one would not be tolerated, as it would be a menace to all; that is our association; that spirit in which it has its birth, and is its ruling sentiment today.

The appreciation of that feeling is evinced by the active interest taken in cities where exchanges have not existed up to this time. The advantages to be derived from such association and organization are too apparent to be longer neglected, and, as you will hear from our secretary, the exchange feeling is growing in every direction, not only in the formation of new exchanges, but in the infusion of new life and spirit among the old.

There are many questions of most lively interest to the building trades that require active consideration and prompt action.

Of the numbers actively engaged in the various branches we have no reliable knowledge, and the monetary value of our productions is in about the same condition.

Some time since a publication in this city made an effort to secure the statistics of the building trades in the various cities of the country, and was compelled to abandon the project, as the facts were not obtainable; the records in most cities being so incomplete that they were worthless.

This is a matter that each exchange should move in at once, and endeavor to have these facts accurately recorded.

Another matter is that of corporation ordinances, particularly those affecting building interests. Too frequently they are carelessly drawn up, and by parties unfamiliar with the needs and requirements of those they affect, and more than that, after those ordinances are perfected, their enforcement should be placed in the hands of a practical and competent man, and not some political favorite, who, although wishing to be just and equitable to all, from lack of knowledge is incapable of properly protecting the interests as intended.

These matters, however, do not belong to the National Association, they are purely local and the affiliated bodies must act independently; but discussion will more rapidly secure the result we are all so desirous of obtaining.

There is another question that does belong to this national body, and although it may be premature to present it at this time, it is surely coming, and we must meet it.

It is. How can we influence and unite the interests of our vast army of employés with our own as employers?

Shall the means be found in a system of profit sharing? By a system of pensioning when age or disability prevents further labor? Or what?

It is a question that requires great thought and most deliberate action, as it affects not only ourselves, but this great land. And when the time does come that action must be taken I feel assured that the decision of this association will be such that not only may we be proud of our connection with it, but be able to say that the builders were the first great body to act in this all-important and far-reaching movement.

Never in our history has the future been more bright. The most encouraging reports come in from all directions, and I will say that if we continue in the work we have done during the past year results will be realized that a short time since were but a dream.

In conclusion, let me repeat that the prime object of these conventions is discussion, and in order to have the most thorough and exhaustive knowledge of the subject under debate I would ask that as many as possible of the delegates express their opinions so that we may arrive at the best conclusions.

The work before us is important, and I know it will receive your thoughtful consideration.

At the conclusion of the address Secretary Sayward appointed William Harkness, Jr., and Charles W. Voshall assistant secretaries.

The president announced as committee upon credentials A. W. Kuhn, of Indianapolis; Charles Gillighan, of Philadelphia; Barclay Cooper, of Minneapolis; Charles W. Gindele, of Chicago, and James Boland, of Buffalo.

The session then adjourned.

FIRST DAY — AFTERNOON SESSION.

The convention was called to order at 1:15 P.M. Augustus W. Kuhn, of Indianapolis, reported for the Committee upon Credentials the following delegates, 127 in number, representing thirty-four cities. The delegates, alternates and visitors attending the convention are as follows:

BOSTON.

Delegates — James I. Wingate, O. W. Norcross, E. N. Whitcomb, James Smith. *Alternates* — Ira G. Hersey, I. F. Woodbury, George Elder, L. F. Perry. *Visitors* — George H. Cavanagh, F. O. Clark, John A. Emery, M. C. Grant, W. S. Samson, Edward Clark, Alfred Neal, Robert Black, Charles Linnehan, W. E. Sherriffs, John Northrops, S. Farquhar, E. E. Sayward, D. B. Garnsey, C. E. Clark, D. McIntosh, L. D. Wilcutt, J. Arthur Jacobs, George H. Converse, S. H. Uhler.

BALTIMORE.

Delegates — E. L. Bartlett, delegate-at-large; J. J. Walsh, John Hitz, J. F. Adams. *Alternates* — P. M. Womble, Jr., George W. Starr, Isaac S. Filbert. *Visitors* — Noble H. Creager, William Ferguson, C. L. Carson, W. F. Bevan, James A. Smyser, George P. Smyser, S. B. Sexton, Jr., W. V. Wilson, Jr., Hugh Sisson, Jr., Herman Duker, George Mann, J. P. Brady, Benjamin Franklin, Nelson Hiss, W. H. Anderson, W. C. Stewart, F. H. Davidson, E. D. Miller, secretary; E. R. Berry, Louis Dill, S. Frank Bennett, George Bunnecke, J. J. Kelly, Israel Griffith, C. E. Haker, George W. Walther, Thomas A. Winn, Peter Hamilton, F. P. Walsh, A. S. Shafer, James D. Green, Joseph H. Hellen, Theodore Krug, Joseph T. Lawton, A. Kohlhepp, John S. Bulloch, Julius Bunnecke, G. D. Crawford, Conrad Kratz.

BUFFALO.

Delegates — J. Boland, John Feist, C. A. Rupp. *Alternates* — C. J. Close, M. J. Byrne.

CHICAGO.

Delegates — George C. Prussing, George Tapper, W. P. Ketcham, chairman; Joseph Downey, John Rawle, W. H. Alsip, C. W. Gindele, M. B. Madden, George Vierling, F. E. Spooner, William Goldy, D. T. Purington, G. A. Fuller. *Alternates* — J. B. Simpson. *Visitors* — James John, E. A. Thomas, M. Campbell, Victor Falkenau, W. L. Hoffmen, J. J. Monahaghan, A. J. Vierling, I. A. Miller, W. H. Mortimer, R. C. McLean, editor of THE INLAND ARCHITECT.

CINCINNATI.

Delegates — Archibald Bolter, George Mason, Samuel Tappin, B. W. Blair, J. M. Blair, D. W. C. Belliville, Samuel Tippets. Patrick Murray, George Murray, Thomas Murray, George Gleason, A. F. Schuyler, Samuel Dickson, James C. Hawood, W. A. Endaly, Robert Carlisle, D. Flaherty, C. E. Witt, Thomas Lee, William H. Stewart, Emil Reuckert, George Hummel, L. B. Hancock, Lawrence Grace, chairman.

CLEVELAND, OHIO.

Delegates — A. McAllister, R. H. Jenks, C. C. Dewstoe. *Alternate* — S. Towson. *Visitors* — E. H. Towson, A. Dall, P. Sheekelton, J. H. Arnold, Mr. Stewart.

DENVER.

Delegates — T. F. La Due, R. C. Greenlee, J. D. McGilvray.

DETROIT, MICH.

Delegates — W. J. Stapleton, H. George, A. Chapoton, Jr. *Alternates* — W. S. Vintin, R. Hilson. *Visitor* — J. Meuthe.

EAST SAGINAW.

Delegates — George C. Zwerk, M. Winkler.

GRAND RAPIDS.

Delegates — Henry E. Doren, H. M. Reynolds. *Alternate* — J. B. Ware. *Visitor* — H. G. Macfie.

INDIANAPOLIS.

Delegates — James E. Shover, George W. Stanley, A. W. Kuhn. *Visitors* — George Weaver, M. K. Fatout, W. H. Brown, Charles Neurge, William Petrie, W. H. Johnson, Frederick Adams, Theo. Kruse, O. L. Huey, J. C. Pierson and lady, Gus Coburn,

James Shay, John Kiley, Philip Kiley, D. F. Freener, R. C. May, Theo. Randall and two ladies.

KANSAS CITY.

Delegates—W. A. Kelly, Henry Goss, W. W. Lovitt, B. F. Swain, David Pullman. *Alternates*—George Dugon, John T. Sedder, William E. Emery. *Visitors*—W. W. Taylor, George M. Banfield, C. L. McDonald, James E. Taylor, Leo J. Stewart, Frank Shinnick.

LOWELL.

Delegates—J. H. Coggeshall, J. W. Bennett, W. H. Staples. *Alternates*—E. S. Foss, P. B. Quinn, Patrick Conlan. *Visitors*—L. F, Kittredge, P. F. Conotan, G. H. Watson, R. Staples, A. Staples, C. R. Costello, A. W. Harris, Wilder Bennett.

LYNN.

Delegates—Frank G. Kelly, Nathaniel T. Davidson.

LOUISVILLE.

Delegates—Thomas Armstrong, Joseph H. Peter. *Alternates*—Frederick Kimble, J. N. B. Strock. *Visitors*—John Greiner, E. R. Burghard, J. F. Merriweather, William Muster, Andred Diebold, Charles Seaman, John Bornheiser.

MILWAUKEE.

Delegates—L. J. Mueller, G. Duench, Clifford Clase. *Alternates*—A. H. Vogel, C. F. Kindt. *Visitors*—H. J. Sullivan, John Landguth, H. Weden, L. Hoffman, J. Peterson, Arthur Bate, Harry Vogt.

MINNEAPOLIS.

Delegates—G. W. Libbey, B. Cooper, H. N. Leighton, John Bowers, J. M. Hazen, S. F. Dodson, F. R. Pettibone, W. Thompson, G. Gillitt, W. K. Morrison.

NEW YORK.

Delegates—Richard Deeves, Daniel Herbert, William C. Smith, John J. Roberts, A. Dickinson, A. J. Campbell, George Moore Smith. *Alternates*—C. T. Wills, C. Andruss, A. G. Bogert, John McGlensey, J. J. Manor, E. P. Leonard, J. M. Canda.

NEW HAVEN.

Committee—J. G. Smith, E. H. Sperry, David H. Clark, John H. Leonard.

OMAHA.

Richard Smith, chairman; J. J. Jobst, S. J. Schall. *Alternates*—A. J. Vierling, George E. Whitlock, George E. Bassett.

PHILADELPHIA.

Delegates—William Harkness, Jr., delegate-at-large; Stacy Reeves, John S. Stevens, Charles Gillighan, Murrell Dobbins, Samuel Hart, George Watson. *Alternates*—John Kisterbock, Franklin M. Harris, David M. Whoelpper, William B. Irvine, John J. Weaver, Peter Gray. *Visitors*—Charles Reeves, J. S. Thorn, David A. Watts. James Moorman, Washington J. Gear, Jr., Charles A. Stine, Jr., H. E. Seeley, Richard A. Watson, George F. Paine, George W. Roydhouse, Jacob R. Garber, David O. Boorse, A. G. Buvinger, Charles Abel, Thomas H. Marshall, William Conway, A. V. Barber, William B. Carlisle, T. Milton Shafto, F. A. Fowler, Edmund Webster, James Johnson, J. B. Goldie, Henry Longcope, William C. Hartramft, R. Peverly, William N. Read, C. F. Linton, James C. Taylor, Jacob Weiner, F. E. Myhlertz, William Peoples, Henry Reeve, Joseph B. Hancock, Charles G. Wetter, H. McInnes, E. H. Thomas.

PROVIDENCE.

Delegates—James S. Hudson, F. C. Markham, J. C. Goff. *Alternates*—J. D. Stuart, George C. Ross. *Visitors*—George R. Phillips, J. W. Briggs, T. B. Ross, Richard Hayward, William F. Cady, J. Frank Read, James C. Peck, M. Goldrick, C. L. Richards, H. F. Mason, Charles P. Merwin, John T. Maguire, P. Tierney, C. F. Dennison, H. W. Goff, E. D. Smith, Charles Hathaway, William F. Shattuck, J. W. Furlong, Henry Peck, James Sheridan, A. C. S. Learned, J. M. Smith, C. F. Sarsford.

PORTLAND, MAINE.

Delegates—A. D. Smith, T. J. Feeney, R. W. Jackson. *Alternates*—Charles E. Snow, D. M. Manniff, George Smith. *Visitors*—J. H. O'Neill, John Horr, Frank Redlon, Melvin Hamblett, Gradner Walker, John Flannigan and two ladies.

PITTSBURGH.

Delegates—J. J. Hamilton, Reese Lindsey, Samuel Steele, Adam Wilson. *Alternates*—Abraham Rasner, A. J. Harnack, C. G. Dixon. *Visitors*—H. R. Barnes, Joseph Keeling, James Murphy, Alexander Hall, Ferdinand Beng, C. H. Stolyenback, James Werry, Robert Mawhinney, E. E. Elliott, A. Pew, J. R. Meredith, E. Magee, F. Lingenfelter, H. L. Kreisler, W. J. Zansler, Matthew Mawhinney, Herman F. Kunkel, C. H. Ruhland, Frank Fertig, George Bauman.

PEORIA.

Delegates—Valentine Jobst, chairman; Frank B. Hasbrouck, Hiram H. Pierce.

PUEBLO.

Delegate—A. M. Crowell.

ROCHESTER, N. Y.

Delegates—W. H. Gorsline, H. H. Edgerton, F. C. Seitz. *Alternates*—T. W. Finnicane, C. W. Voshall, F. P. Stallmant. *Visitors*—Charles Vogel, John Smith, W. Hagaman, Isaac Christiansen, C. C. Meyer, W. J. Devendorf, Edward Stranchen, John R. Stranchen, R. Williamson, F. G. Trangott, Joseph Mandery, C. J. Hoffman, H. M. Hart, John Luther, John Heoron, Henry Lomb, J. P. Western, Edward Lauer, F. L. Hughes.

SIOUX CITY.

Delegates—Frank Clark, J. A. Harris, George Ellerd, Albert Ellerd.

ST. JOSEPH, MO.

Delegates—John De Clue, William Elliott, D. E. Marshall. *Visitors*—Thomas Winn, George Knoop, Thomas Crothers, Richard De Clue, George Crothers.

ST. LOUIS.

Delegates—Thomas J. Kelly, Anthony Ittner, William A. Rutter, J. B. Legg, William M. Anderson, P. Mulcahey, William J. Baker. *Alternates*—James L. Yuedry, Charles J. Behrens, Thomas P. McKelliget. *Visitors*—Will B. Walsh, Ed. P. Collins, Richard Walsh, T. J. Larkin.

ST. PAUL.

Delegates—E. E. Scribner, J. W. McKinnon, J. H. Donohue, M. G. Craig. *Visitors*—George J. Grant, J. M. Carlson, Gates A. Johnson, E. J. Donohue, George M. Brack, G. W. Partridge, H. H. Mann.

SAN FRANCISCO.

Delegate—Charles C. Terrill.

SYRACUSE, N. Y.

Delegates—Henry F. Crawford, James E. Baker, John Moore, director. *Alternates*—J. A. Isley, Charles F. Wisehoon. *Visitors*—Harry Ryan, Fred L. Straze, George Clark, Thomas Carr, Frank Hunt, Daniel O'Brien, Thomas Jackson.

UTICA, N. Y.

Delegates—John F. Hughes, William Fisher.

WILMINGTON, DEL.

Delegates—A. S. Reed, L. T. Grubb, A. L. Johnson.

WORCESTER, MASS.

Delegates—H. W. Eddy, J. T. Darling, W. F. Dearborn. *Alternates*—C. H. Vaughn, G. D. Webb, J. D. Smith. *Visitors*—T. Smith, J. Prickford, T. O. Gara, W. Knowles, T. D. Perry, B. W. Stone, D. C. Tuley, Mr. McGrath, W. W. Lowell, E. Adams, H. H. Stoddard, F. S. Dearborn, George Kingston, G. W. Carr, O. S. Kendall, R. S. Griffin, George Bouchard, A. M. Kelly, C. O. Richardson, D. W. Darling, J. A. Norclose, C. D. Morse, J. H. Hartwell, J. P. Bocknell, G. I. Vanderull, Samuel Hull.

WASHINGTON, D. C.

Delegates—Thomas J. King, R. J. McCarty, H. A. Jones, Fred. W. Phillips. *Alternate*—Morgan Thomas. *Visitors*—J. R. Galloway, Joseph F. Bradley, Thomas F. Stephenson, J. W. Thomas, H. F. Getz, John McGregor, Robert Low, Frank E. Smith, George E. Hutchins, Joseph Mathey, D. C. Fahey, J. W. Drew, F. N. Devereaux, George Spramey, A. L. Phillips, J. W. Carr, C. A. Schneider, L. A. Littlefield, Charles J. Fanning, William Cammack, Jacob Viehmeyer, Robert Clarkson, Charles A. Langley.

After roll call the convention adjourned and the delegates proceeded in a body to inspect Colonel Auchmuty's trade schools.

Colonel Auchmuty welcomed the visitors, and stated that so widespread is the desire to learn a trade well that they had young men from twenty-three different states, Nova Scotia and Montreal. He said: "Here are fourteen houses, the walls of which were built by the graduates of the bricklaying class. I think any mason builder would say that the work of these young bricklayers is better than the average contract work." He believed the solution of the labor question is in education.

Bishop Henry C. Potter was introduced to the visitors by Colonel Auchmuty. He said: "Gentlemen of the National Association of Builders, I think the humor of the situation must be apparent to you as it is to me. The gentlemen of the press have asked me, with fine sarcasm, whether I am here this afternoon to speak to you because of my technical knowledge. I am reminded of the man who was picked up in the gutter very drunk, to whom somebody said, 'I thought you lectured on temperance? 'No,' said he, 'I am the frightful example.'" The bishop said that when it came to technical knowledge of building, he was a frightful example to builders. Yet, he thought there was a close analogy between the builder's calling and his own, for in the old English usage a clerk was an ecclesiastic. To read, to write and to cipher was for a long time the exclusive privilege of clergymen. Clergymen in those days were the teachers of other men. But a time came when the parson ceased to be an all-'round man, and then came the school, the college, the university, in which men were taught not only what the parson could teach them, but all the knowledge possible to human enlightenment. Once the master and the apprentice lived under the same roof and ate at the same table. That condition is no longer possible today. The apprentice today is a boy or a youth out of whom the employer tries to get the best profits he can, without considering the boy's welfare. There are a few exceptions to this. The apprentice's opportunities for enlightenment are very imperfect. The speaker asked what could be done with the boy or young man who wants to learn a trade thoroughly. He thought the only hope for him was in trade schools. He thought young men in most great American cities are doomed to do tasks to which feminine talent and aptitude are better adapted. The cause of this is that, under the present condition of things, the avenues to labor for the apprentice are closed by purely arbitrary associations in which the element for personal interest obscures the larger interests of the whole. (Applause.) The speaker did not wish to be misunderstood,

he said. He had no word to say against the right of labor to organize. He wished the preachers were organized to protect the parson from the salary of a country minister. "But," said he, holding up his hands, "I deny anybody the right to deny to me the privilege to take this God-given instrument and do with it the finest possible work in any direction which my taste and genius may draw me." He thought America would be happier and better if its native talents were employed more largely in constructive work. The finer mechanical work in this country is the result of imported labor or imported laborers. It is not our own work. The reason of this is to be found in the great technical schools beyond the seas. American labor would drag in the rear until it followed in the footsteps of these foreign examples. In conclusion, he said, "God bless Colonel Auchmuty for teaching rich men how to use wealth."

In response to many calls, Mr. Sayward said that it was hardly appropriate for him to say anything after the eloquent speech just heard. His heart was filled with satisfaction by the exhibition in the schools. Through all the years that he had been working in behalf of the National Association, he had looked forward to the time when he could bring a representative gathering of the builders of the country to the trades schools of this great philanthropist. He hoped the builders would take away with them the lesson, that through their exchanges they should be teaching the youth of this country. (Applause.)

SECOND DAY—MORNING SESSION.

The convention was called to order at 10:20 A.M., President Tucker in the chair.

When the roll call was disposed of, the presentations of resolutions commenced.

Anthony Ittner, of St. Louis, offered a resolution to the effect that the convention memorialize congress for the passage of the Torrey Bankruptcy Bill.

J. D. McGilvray, of Denver, offered a resolution regarding the duty of the various exchanges represented in the convention to devise a more perfect and ampler apprentice system than is at present in vogue.

Richard Smith, of Omaha, offered a resolution concerning convict labor.

Richard Deeves, of New York, proposed an amendment to the Uniform Contract: "That the contractors shall be responsible and shall hold the owner harmless for all accidents, damages and violations of law through carelessness or neglect on his part."

President Tucker appointed the following Committee upon Nominations and Place of Meeting: Richard Smith, of Omaha; R. H. Jenks, of Cleveland; E. Noyes Whitcomb, of Boston; I. F. Adams, of Baltimore; William A. Rutter, of St. Louis.

Secretary Sayward then read his report. He said that the duties of the secretary had been much more various and absorbing in the year past than ever before, but that the work connected with the office had been done much more promptly and thoroughly because of the assistance he had received from his secretary, and thanked the directors for granting him this assistance. At the last convention, he said, thirty-five exchanges were represented; since then but one new body had been added — the Exchange of Peoria, Illinois. Brooklyn, Charleston, Hartford and Wheeling have dropped out. The reason of the defection of these exchanges was local, he thought. He said he was in communication with exchanges in a number of cities, and several, he believed, would join the association before the next convention. The South, he added, was still unrepresented in the association. Continuing, he said the influence of a representative body like the National Association has been acknowledged in many places beyond its jurisdiction. For instance, the documents and reports of the association had been printed in Melbourne, and a national movement had been started in Australia similar to that in this country. It was also satisfactory to note that the National Master Builders' Association of Great Britain frequently refers with commendation to the work of the organizations in this country. The secretary suggested the issuance, by the body with which he was connected, of a periodical statement of the condition of the building trades in the various cities in this country, as was done by the English association. He thought, also, there was room for the establishment of a building accident insurance company for the protection of builders, similar to the one existing in London. Among the new works undertaken by the secretary's department during the past year is that of keeping a perfect record of organizations connected with the building business in the United States. On the record there are now the names of 616 organizations. In addition, in Canada there were thirty-six, and in other countries seventy three. Except so far as the figures for this country are concerned, these statistics, the secretary said, are not complete, but merely represent his information as far as it goes. The establishment of trade schools under the patronage and direction of builders' associations was progressing very slowly, he was sorry to say. The Philadelphia Exchange, however, had made a brilliant success with its schools, and he was satisfied that after the visit, which is to be paid to these schools by the convention, every delegate and visitor would be convinced that this is work which the builders must undertake for their own protection and for the salvation of the building trades of this country. Among other matters touched upon by the secretary was one deserving especial attention. He said that a leading member of the Board of Exchange had presented strong views to him in regard to the forming of unions of employers in all the special trades, to act with the same unity and force as the unions of workmen, and to retaliate for their overt acts. In touching upon the contract question, the secretary mentioned a case that arose in Boston, where certain builders were invited to figure upon some work, with the understanding that the lowest bidder was to receive the contract. The lowest bidder, however, was invited to make certain changes in his bid, afterward to be brought in competition. After some discussion and wrangling on the matter, the contract was awarded to somebody else, and the lowest bidder brought suit for damages, with the result that he obtained a verdict of $14,500 for being deprived of a contract which belonged to him. (Applause.) In closing, the secretary drew attention to the fact that only by persistently hammering upon the various reforms to which the association was committed could they be carried out, namely, the Uniform Contract; the establishment of trade schools; the improvement of the relations between the builder and the architect as to function, authority, methods and practice and the sub-contractor difficulty.

The report of the secretary was long and interesting, the above covering the more important portions. It was received and adopted with a rising vote.

Treasurer George Tapper, of Chicago, read his annual report, which showed, after an approximate estimate of the convention expenses, a balance of $2,000 in the treasury of the association. A. S. Reed, of Wilmington, and William A. Kelly, of Kansas City, were appointed by the president as auditing committee.

The reports of standing committees being next in order, that upon Sub-Contracting, James A. Miller, of Chicago, chairman; that upon Arbitration, J. Milton Blair, of Cincinnati, chairman, and that upon Uniform Contract, George C. Prussing, of Chicago, chairman, and that upon Builders' Surety Company, were submitted and laid over until the following day for discussion, according to the convention programme.

The convention then adjourned until 2 o'clock P.M.

SECOND DAY—AFTERNOON SESSION.

The session convened at 2:20 P.M. The first business transacted was the reading of a resolution offered by Mr. Kelly, of St. Louis, extending the thanks of the convention to Col. R. T. Auchmuty, for kindness shown in permitting them to inspect his trades schools, and to Bishop Potter for his "very able address" delivered during the visit. The resolution was adopted, and this was followed by another resolution making Colonel Auchmuty an honorary member of the National Association of Builders. The latter was adopted by a standing vote.

The auditing committee on the treasurer's report announced that they had examined the accounts and vouchers and found them to be correct.

Secretary Sayward then read an invitation from "The Employing Plasterers in Convention with the National Association of Builders," extending a cordial invitation to all employing plasterers visiting the city to meet them at the Ashland House, Fourth avenue and Twenty-third street, at 10 o'clock P.M.

President Tucker read a request from the National Association of Fire Engineers for the appointment of a committee to meet a joint committee of fire engineers, architects, builders and building inspectors to frame a uniform building ordinance, said committee to meet in New York, on April 2 next.

Mr. Madden, of Chicago, made a motion that a committee of seven, to represent the National Association of Builders (two of whom to be the president and secretary), be appointed, which was carried.

Consideration of the amendment of Article IV of the constitution, so that persons serving a term as president shall become permanent directors, then commenced and led to a long and animated discussion, which was opened by Mr. Kuhn, of Indianapolis, who thought nothing was to be gained by the adoption of the amendment, and moved that it be laid on the table. Mr. King, of Washington, proposed the substitution of the word "advisory" for the word "permanent," which motion was seconded by Mr. Mulcahy, of St. Louis. Mr. Ketchum, of Chicago, offered an amendment to the amendment: "Any person having served a term as president of this association shall, by virtue of that service, become a director for five years, in addition to the directors otherwise provided for." Upon the seconding of this, Mr. Craig, of St. Paul, added: "Provided such president continue an active member of our affiliated body for such term of five years." Mr. Ketchum consented to this addition. At this point Mr. McGilvray, of Denver, arose and energetically objected to the amendment to the constitution and the principle underlying it. He wanted to be informed of the purpose in view in creating honorary positions.

Mr. Alsip, of Chicago, said, that whereas he was heartily opposed to the amendment as put at first, he had no objection to the five years' term and was ready to vote for it.

Mr. Campbell, of New York, said the founders of the organization had done good work. The choicest spirits in the organization were its leaders. They were men selected from all parts of the country, and in the nature of things were the men with the widest experience in their locality. He thought the convention should accept the amendment in its original form.

Secretary Sayward then took the floor, "not as secretary of the organization," he said, but "as a delegate from Boston." In answer to Mr. Campbell's question, as to who was the author of the amendment, he was the guilty party; but he had not originated it to confer special honor upon anyone, but that the association might be benefited by the wisdom and experience of the gentlemen it called to the chair.

He thought the association could not forego the assistance of these gentlemen. In his estimation the director's meetings were not overburdened with numbers.

Mr. Swain stated that while the gentleman who had just concluded his able address could not go beyond him in honoring the ex-presidents, he objected to the original amendment and the amendments to it.

Messrs. Campbell, Rutter, Deustoe, Gindele and Boland spoke to the amendment.

Mr. McGilvray, of Denver, thought the real question at issue had been evaded in the discussion. It was not one concerning the personality or the value of the services of the presidents of the association, but one involving a principle, the creation of a sort of hereditary body.

Mr. Sayward again took the floor, and warmly declared that nothing had been evaded, nor was the amendment skillfully intruded, as one of the speakers had asserted. The object of the amendment was not to honor anyone. "We are seeking for something we want." The association requires the continued services of people who are men of experience in their particular line. He trembled for the time when the association would say: "Shelve these men as fast as they have gone along. Don't let us get anything more from them." The amendment was finally lost by a vote of sixty-eight in the affirmative, fifty-four in the negative, a two-thirds vote being necessary to amend the constitution or by-laws.

A paper upon "The Legal Aspect of Strikes and Boycotts" was read by John L. Wilkie, and a vote of thanks was passed to Mr. Wilkie, and the paper ordered printed in the minutes. The session then adjourned.

THIRD DAY — MORNING SESSION.

The president announced the following committee to represent the association in the joint committee of fire engineers, architects, builders and building inspectors: Stacy Reeves, of Philadelphia; Joseph Downey, of Chicago; Warren A. Conover, of New York; William A. Rutter, of St. Louis; W. H. Grosline, of Rochester, and the president and secretary.

The secretary then read the report of the Committee on Arbitration, as follows:

REPORT OF COMMITTEE ON ARBITRATION.

The committee appointed at the last convention of the National Association of Builders, to prepare a form of arbitration, offer to the delegates assembled at the fifth annual convention the result of their deliberations.

The committee call attention to the fact that one of the fundamental points of the Declaration of Principles of the National Association recites that "employers in the building trades should recognize that there are great opportunities for good in associations of workmen, and while opposing and condemning improper methods and action upon the part of such associations, they should still be ready to aid and assist them in all just and honorable purposes."

Your committee believe it to be possible and desirable for employers and their workmen to unite in establishing a method by which the interests of workmen and the interests of employers may each receive just consideration, and through which the relations of each to the other may be harmoniously adjusted.

They believe that to secure the establishment of such a method, it is absolutely necessary that there be associations of employers and associations of workmen, to serve as representative bodies in the premises, in order that the action taken may comprehend, as fairly as possible, the collective interests of the individuals on both sides, and in order that the practices recommended may, through them, be more generally adopted.

They believe that no association desiring recognition as a representative body should, either in its form of organization or through its by-laws, rules, or practices, attempt to independently or arbitrarily control or influence the action of others; but, recognizing the rights of others, should adopt measures that will lead to joint consideration and joint action in all matters of mutual concern.

They believe that associations established on the principles above expressed should be heartily encouraged, all persons eligible thereto should be urged to join, and every legitimate effort made to convince them that it is their duty to unite with their fellows in all honorable methods for the establishment and maintenance of just and proper practices among themselves and in their relations to others.

In harmony with these views, and believing it is the manifest duty of the National Association to recommend to its filial bodies a definite and universally applicable method of arbitration in place of objectionable methods, or lack of method, heretofore existing, and which shall fully recognize the rights of both employers and workmen.

Your committee offer the following draft of a form of organization of a joint committee, and certain other action deemed essential, which they believe to be applicable for the use of any and all of the various branches of the building trade, and offer it as an honorable plan, which filial bodies may safely recommend to employers and workmen in the building trades, for the peaceful settlement of all matters of mutual concern.

Your committee recommend that all filial bodies be urged to present this simple plan to the various trades represented in their bodies, requesting their various special trades to organize, if not already organized, and then offer this plan to the organizations of workmen in their trades as the basis for a mutual agreement and understanding which shall prevent all further disputes.

Form of Agreement to secure the establishment of Arbitration Committees, with Plan of Organization of the same, for the use of Associations of Employers and Associations of Workmen in all branches of the Building Trade.

AGREEMENT.

For the purpose of establishing a method of peacefully settling all questions of mutual concern,.....(Name of organization of employers) and.....(Name of organization of employés) severally and jointly agree that no such question shall be conclusively acted upon by either body independently, but shall be referred for settlement to a joint committee, which committee shall consist of an equal number of representatives from each association; *and also agree that all such questions shall be settled by our own trade, without intervention of any other trade whatsoever.*

The parties hereto agree to abide by the findings of this committee on all matters of mutual concern referred to it by either party. It is understood and agreed by both parties that in no event shall strikes and lockouts be permitted, but all differences shall be submitted to the joint committee, and work shall proceed without stoppage or embarrassment.

The parties hereto also agree that they will incorporate with their respective constitutions and by-laws such clauses as will make recognition of this joint agreement a part of the organic law of their respective associations. The joint committee above referred to is hereby created and established, and the following rules adopted for its guidance:

ORGANIZATION OF JOINT COMMITTEE, AND RULES FOR ITS GOVERNMENT.

1. This committee shall consist of not less than six members, equally divided between the associations represented, and an umpire, to be chosen by the committee at their annual meeting, and as the first item of their business after organization. This umpire must be neither a journeyman craftsman, nor an employer of journeymen. He shall preside at meetings of the committee when necessary.

2. The members of this committee shall be elected annually by their respective associations at their regular meetings for the election of officers.

3. The duty of this committee shall be to consider such matters of mutual interest and concern to the employers and the workmen as may be regularly referred to it by either of the parties to this agreement, transmitting its conclusions thereon to each association for its government.

4. A regular annual meeting of the committee shall be held during the month of January, at which meeting the special business shall be the establishment of "Working Rules" for the ensuing year; these rules to guide and govern employers and workmen, and to comprehend such particulars as rate of wages per hour, number of hours to be worked, payment for overtime, payment for Sunday work, government of apprentices, and similar questions of joint concern.

5. Special meetings shall be held when either of the parties hereto desire to submit any question to the committee for settlement.

6. For the proper conduct of business, a chairman shall be chosen at each meeting, but he shall preside only for the meeting at which he is so chosen. The duty of the chairman shall be that usually incumbent on a presiding officer.

7. A clerk shall be chosen at the annual meeting, to serve during the year. His duty shall be to call all regular meetings, and to call special meetings when officially requested so to do by either body party hereto. He shall keep true and accurate record of the meetings, transmit all findings to the associations interested, and attend to the usual duties of the office.

8. A majority vote shall decide all questions. In case of the absence of any member, the president of the association by which he was appointed shall have the right to vote for him. The umpire shall have casting vote in case of tie.

Clauses to be incorporated with By-Laws of parties to Joint Agreement.

A. All members of this association do, by virtue of their membership, recognize and assent to the establishment of a joint committee of arbitration (under a regular form of agreement and governing rules), by and between this body and the ..... for the peaceful settlement of all matters of mutual concern to the two bodies and the members thereof.

B. This organization shall elect at its annual meeting ..... delegates to the said joint committee, of which the president of this association shall be one, officially notifying within three days thereafter the said .... .of the said action and of the names of the delegates elected.

C. The duty of the delegates thus elected shall be to attend all meetings of the said joint committee, and they must be governed in this action by the rules jointly adopted by this association and the said.....

D. No amendments shall be made to these special claims A, B, C and D, of these by-laws, except by concurrent vote of this association with the said ....and only after six months' notice of proposal to so amend.

J. MILTON BLAIR,
ANTHONY ITTNER,
GEORGE C. PRUSSING,
MARC EIDLITZ,
DAVID A. WOELPPER.

G. C. Prussing, of Chicago, moved the adoption of the report, seconded by J. S. Stevens, of Philadelphia. The report was then discussed.

Mr. Swain, of Kansas City, speaking to this motion, said that they had tried arbitration in his city and found it wanting. He objected to recognizing the right of unions to dictate who should be foreman and how many apprentices an employer should have. He stuck, he said, to the principles that the builders had a right to employ or not to employ, and he should vote against the report,

Mr. Blair, of Cincinnati, said that the organization of workmen was fully equipped, and the only way in which employers could effectively discuss with them questions of material interest was through an organization on their side.

The speaker went on to say that it was the intention of the committee that the joint committees in every city should impress on the men that the interests of the two parties were mutual. Arbitration pre-supposed organization on both sides, in order that the agreement might be authoritative and binding. He advised the employers to emulate the example of the workingmen and perfect their associations, so that in case of any contest or in case of any agreement, they would be prepared either to stand the former or abide by the latter.

Mr. Gindele, of Chicago, then gave an instance of the benefits of arbitration, by telling the story of a strike in Chicago, in 1886. The struggle had lasted for three months, and had been very bitter. Then the master masons consented to meet the workingmen's representatives, and an agreement was finally reached. Since then there has been no trouble. Mr. Gindele, however, objected to the selection of a judge as umpire, because the position was political. Mr. Alsip, of Chicago, spoke in favor of the report; but Mr. Moore, of Syracuse, objected to the interposition of any organizations in the management of his affairs, and thought and stated that no good could come of such intervention. Mr. McGilvray, of Denver, took exception to Mr. Moores' remarks. He thought that trades unions were of as much benefit to masters as to men, and that arbitration was an equitable method of settling the disputes which necessarily arise. Mr. Hersey, of Boston, also favored the resolution, but did not think that the labor unions of his city would like it. Mr. Armstrong, of Louisville, spoke disparagingly of the influence and methods of trades unions, and said that they were aggressive and unscrupulous. Mr. Watson, of Philadelphia, thought that the laborers were sensible and well disposed, and favored the plan of the Committee on Arbitration, particularly for large cities. Mr. Stevens, of Philadelphia, laid down as a fundamental principle that the men have a right to work or not to work, and masters to employ them or not to employ them. He believed the resolution tended to violate this principle. Mr. Reeves, of Philadelphia, said that organization was in the air, and that employers had suffered in the past from being more weakly associated than were the workingmen. Mr. Dewstoe, of Cleveland, stated the opinion that there were some principles which were not arbitrable, and among these was that of individual liberty, which was threatened by the report of the committee. Mr. Baker, of St. Louis, thought that trades unions ought to be accepted as facts which had come to stay. Mr. Walsh, of Baltimore, said that the workingmen in his city were associated with the Federation of Labor, and that that organization must be controlled before arbitration could become possible. William A. Rutter, of St. Louis, said he favored arbitration as a prevention of strikes, and that he had found it to his advantage to conciliate his workingmen as far as possible.

Mr. King, of Washington, then moved to strike out Section 6 of the report, which he believed tended to strengthen the hands of organizations which he and his associates, as employers, were liable to come in conflict with. He favored arbitration, but did not wish to fortify a possible enemy. The motion was seconded; and Mr. Prussing, of

Chicago, opposed the amendment and explained the meaning of the report, which, he said, did not conflict with the principle laid down by Mr. Stevens. A discussion followed between Mr. King and Mr. Prussing. The latter was then given an opportunity to explain himself more fully. He said that he did not advocate a concession to the workingmen, but to reason. He said that the meat of the report lay in Section 3, which expressed the belief of the committee that some method might be established by which the interests of employers and employés might be favorably adjusted. Mr. Legg, of St. Louis, then offered a substitute resolution, in favor of which Mr. King withdrew his amendment. Mr. John Rawle, of Chicago, spoke in favor of arbitration, and instanced a case in which a difficulty of twenty-six years' standing had been settled. Mr. George, of Detroit, thought that arbitration was all right where the two parties are equal; where they are not, it is all wrong. Mr. Richard Deeves favored arbitration, which, he said, had worked very well in this city; but he also favored the substitute, because he thought that Section 6 forced men into the union. Secretary Sayward then spoke against the substitute. He thought the trouble had been largely the fault of the employers, because they had not organized in time. The committee had suggested a basis for agreement between employer and employé on the broad platform of justice. He pointed out that the National Association was only advisory, that they came together for counsel and to recommend back to the affiliated bodies feasible methods of doing the things that are proper to do. Mr. Sayward then made an able plea for the report in its entirety, and said that Section 6 had been misunderstood by those who opposed it. He concluded with an earnest appeal for a solution of the question under discussion. Mr. George moved to lay the matter on the table, which was defeated. Mr. King proposed to strike out certain words in Section 6, and the motion was adopted by a vote of 64 to 42. The report of the Committee on Arbitration was then adopted as amended, and the session adjourned.

THIRD DAY—AFTERNOON SESSION.

The session was called to order at 3:30 P.M., and the president announced that the first business of the afternoon would be the consideration of the report of the Committee on Reforms in Sub-Contracting.

Mr. Walsh moved that the report of the Committee on Reforms in Sub-Contracting be adopted.

On motion of Mr. Woodbury, of Boston, it was decided to take up the report article by article.

The secretary then read the first article, and on motion, duly seconded, it was adopted.

The secretary then read Article II. Quite a lengthy discussion followed the motion for the adoption of this order. Mr. Armstrong, of Louisville, said there was an open question in the article, as it said "however obtained," which words should be stricken out. Mr. Miller, of Chicago, stated that the article read, "any sub-bid knowingly opened," and that the article didn't apply unless the bid was knowingly received or knowingly opened.

Mr. Stevens, of Philadelphia, stated that if anyone opened a bid and didn't want to use it he could put it back again, and if it didn't have upon the envelope the statement spoken of by the report further on, it was the fault of the person who had sent the bid for not sending it in the proper envelope. It is customary to put on the outside of a bid information as to who it was from and what work it was for, and if the gentleman didn't want to open the bid and knew it was from a party he didn't want to give it to, he need not open it, but if any such restriction as proposed was placed upon the envelope and it was not opened knowingly, the contractor need not be compelled to accept it.

Mr. Moore, of Syracuse, believed that every respectable contractor who was bidding on the entire work and solicited bids on a special part of it was in honor bound to treat the lowest bidder fairly, and award him a contract if his bid was satisfactory, but stated that no matter what action the convention took, he should never feel compelled to let a contract to someone he didn't want to let it to.

Mr. Deeves, of New York, thought if he didn't solicit a bid he shouldn't be compelled to accept it, and according to his reading of the paragraph, if he received the bid and it was the lowest, he would be bound to accept it.

Mr. Hart, of Philadelphia, suggested striking out Section 2, as it conflicted with Section 1, and moved that it be stricken from the report, which was seconded by Mr. Hiltz, of Baltimore.

Mr. Stevens stated that there was one clause in Article II which was not touched upon in Article I and, as he thought that that clause should be adopted, moved, as an amendment to the amendment offered by Mr. Hart, to strike out all of Clause 2 and make it read as follows: "A sub-bid should always be treated by the general contractor as a confidential communication, and should not be disclosed by the general contractor at any time, without the consent of the sub-bidder." This was seconded and Mr. Hart accepted the amendment.

A vote was taken upon the amendment proposed by Mr. Stevens, and it was lost. Article II as proposed was then adopted.

Secretary Sayward stated that he had been asked to present a suggestion to the delegates at this point in the consideration of the report. He apprehended that while the general contractor, by the two proposed articles, Nos. 1 and 2, had been restricted, the sub-bidder had not in any way been restricted, and the communication he had was from a gentleman in New York, who stated that a verdict of much importance to contractors and sub-contractors had been rendered in one of the New York courts a couple of weeks ago. A certain party, in taking a contract for the mason work on a job, invited bids from sub-contractors, and selected the lowest in a certain line, and used his bid in making his whole bid. After the contract was awarded to him he notified the sub-contractor of the acceptance of his sub-bid, and the sub-contractor wrote back that he had made a mistake, and refused to go on with the work. The contractor then took other bids, and awarded it to the lowest, and sued the original sub-contractor, who had backed out, for the difference, and got a verdict.

The secretary then read Section 3 and, upon motion, it was adopted.

The secretary read Section 4, and it was moved and seconded that it be adopted.

Mr. Deeves, of New York, did not favor the article; neither did Mr. Dewstoe.

Mr. Ittner, of St. Louis, thought the clause should be adopted, as it was intended to cure very objectionable practices in some cities.

After some further discussion by Mr. Gindele, of Chicago, and some others, it was moved and seconded that Article IV be stricken out, as Article VI covered the ground.

Mr. Deeves offered as an amendment to Article IV as he thought it would cover the chief objections, to make it read as follows: "The general contractor should refuse estimates from sub-contractors who at the same time leave estimates for the same work in architects' offices."

The amendment was lost.

The motion to strike out Article IV was then put and carried.

The secretary read Article V.

Mr. Madden, of Chicago, thought the convention would be unable to finish the consideration of the report if the members continued to quibble at every line and section in it, and moved, for the purpose of facilitating business, a reconsideration of the vote by which it was agreed to take it up section by section. This motion having been seconded, it was put to the convention and lost.

Mr. Deeves moved to amend by striking out the word "offices," which was seconded by Mr. Sayward. The amendment was then adopted and also the original article as amended.

The secretary then read Section 6, and on motion, duly seconded, it was adopted.

The secretary read Article VII, and Mr. Kelly, of St. Louis, moved that it be stricken out and the following substituted: "Payments to be made by the contractor to the sub-contractor on account, as the work progresses, final payment to be made when the sub-contractor's work is completed to the satisfaction of the owner or his authorized agent."

Mr. McAllister objected to this.

Mr. Woodbury, of Boston, then proposed an amendment or substitute for Article VII, which was put and lost.

An amendment offered by Mr. Kelly was then voted upon and lost, and the article as originally read was adopted.

The secretary then read Article VIII, which was adopted, as was also Article IX. Article X was also adopted.

Mr. Walsh, of Baltimore, moved to strike out all of Article XI after the words "and in addition to the above, each exchange shall prepare and furnish to its sub-contractor members' envelopes which shall have on their face the name of the exchange," which was seconded.

The motion of Mr. Walsh was carried.

The secretary read Article XII, and on motion of Mr. Cahill, of St. Louis, it was stricken out.

Article XIII was stricken out on motion of Mr. Fuller, of Chicago, duly seconded, although Mr. Reeves, of Philadelphia, opposed the motion.

Article XIV was adopted. Also Article XV. Article XVI was read by the secretary, and Mr. Purington, of Chicago, moved to amend by inserting the words "or change" between the words "cutting and necessary."

Mr. Vitter, of Detroit, moved that Article XVI be stricken out, because the architects' specifications generally state which mechanic shall do the respective work.

Mr. Reeves, of Philadelphia, opposed Mr. Vitter's motion to strike out, and after speeches by Mr. Dewstoe, of Detroit, Mr. Gindele, of Chicago, and Mr. Booth, of Milwaukee, the president put Mr. Vitter's motion to strike out, and it was carried.

Article XVII was then adopted.

The whole paper, as amended, was then adopted by a rising vote, It is as follows:

REPORT OF COMMITTEE ON REFORMS IN SUB-CONTRACTING.

To the President and Directors of the National Association of Builders:

GENTLEMEN,—Your committee, appointed at the annual convention at St. Paul, under the following resolutions:

"WHEREAS, Many evils and wrong practices have become prevalent through the present methods of sub-bidding and sub-contracting; and

"WHEREAS, It is for the best interests of both direct contractor and sub-contractor to have a more complete understanding of the rights and practices which should prevail to constitute and comprehend honorable dealing; therefore be it

"*Resolved*, That a standing committee of five be appointed by the chair to take this subject into consideration, make thorough investigation, and report at the next convention;"

desire to present as the result of their deliberations the following

REPORT.

1. A principal contractor having been awarded a contract involving sub-contracts, his estimate having been based upon sub-estimates, should award the said sub-contracts to the lowest solicited bidders whose bids were received by him prior to his having made out his own bid, and should notify the sub-bidders that their estimates have been accepted or rejected, as soon as the contract has been awarded to him; and should without unnecessary delay execute with the lowest solicited bidders such contracts as may be mutually satisfactory; promptness upon the part of the contractor in notifying the sub-bidders of the acceptance of their bids and the executing of these contracts being essential to the proper compliance of this rule. Should a principal contractor receive a sub-bid unsolicited, he should not be considered under obligation to use the said bid, even if it be the lowest; but he must not reveal the bid, nor use it in any way to influence any other party.

2. Any sub-bid knowingly opened by a principal contractor should be, for the purpose of this article, considered as having been solicited. A sub-bid should

always be treated by the general contractor as a confidential communication, and should not be disclosed by the general contractor at any time without the consent of the sub-bidder; but contractors knowingly receiving or obtaining knowledge from whatever source, of the bids of sub-bidders must treat them as solicited bids.

3. Sub-contractors should avoid leaving their estimates in architects' offices, when they are received there simply as an accommodation to, and for the information of, principal contractors.

4. When bids are submitted in architects' offices, or to the owner, for portions of building work, they should be considered as *direct* estimates only.

5. Contractors should decline to give architects or owners estimates in the aggregate when the said architects or owners are soliciting estimates in detail, nor should estimates be furnished in detail when estimates are solicited in the aggregate.

6. Payments should be made by the contractor to the sub-contractors on account, as the work progresses, final payment to be made when the sub-contractor's work is completed, and should not be delayed until the entire building is completed to the satisfaction of the owner or his authorized agent.

7. Anyone detected in trading on any of the sub-bids, whether they be solicited or unsolicited, or however knowledge of them may have come into his possession, should be liable to forfeiture of membership, censure, or suspension, as the board of directors, or general exchange of which he is a member, may direct.

8. A contractor having obtained work upon bids received from sub-contractors, has received from those sub-contractors valuable considerations, for which proper remuneration should be given; the proper remuneration being the awarding to said sub-contractors of their respective sub-contracts; and the damage to the sub-contractors for failure of the contractor to make such awards should be estimated at the liquidated damages of not less than ten per cent of the amount of their respective bids; the payment of these damages by the contractor not necessarily to relieve him from being disciplined by his exchange for dishonorable conduct.

9. To bring this code at once to the attention of those interested, and to prevent it from being forgotten, or its rules overlooked, each exchange should prepare copies of this code of practice, printed in large type, and posted conspicuously upon the walls of the exchange, where they can be readily referred to by all members.

10. The declining by a sub-contractor to go upon a general contractor's bond shall not be a proper reason for the general contractor to decline or refuse to award to said sub-contractor a contract that by this code properly belonged to him.

11. This association recommends to all affiliated bodies that they adopt this code and pass proper rules for its enforcement and to enable them to discipline their members for violation of this code in their dealings with members of affiliated bodies, as well as with members of their own exchange.

12. Any member having work to let should, as far as consistent with business principles, deal only with members of his own or an affiliated exchange, and should do all in his power to forward their interests.

13. To properly enforce this code, each exchange should have a rule about as follows, viz:

Any member of this exchange who shall be guilty of unfair, dishonest, or unbusiness-like conduct in the transaction of any business, either in competition for work or material, or refusal to comply with a contract, according to the terms thereof, or by declining to enter into a contract after the same has been awarded to him, shall be deemed guilty of a violation of the rules of this exchange, and if after a fair trial he shall be so adjudged, he shall be liable to suspension or expulsion.

Respectfully submitted,
JAMES A. MILLER, Chairman,
W. A. KELLY,
STACY REEVES,
ABRAHAM RASNER,
SAMUEL FARQUHAR.
Committee on Sub-Contracting.

The session then adjourned.

FOURTH DAY—MORNING SESSION.

The convention assembled at 10:30 A.M., President Tucker in the chair.

The first order of business was discussion upon the report of the Committee on Uniform Contract, which, after the reading of a note of courtesy from the New York Chapter of the American Institute of Architects, was taken up. The report is as follows:

REPORT OF THE COMMITTEE ON UNIFORM CONTRACT.

To the President and Delegates to National Association of Builders in Convention assembled in New York, February, 1891:

GENTLEMEN: Your committee finds an acknowledgment of the value of a uniform contract in the volume of correspondence had on the subject, and is flattered with the expressions of approval bestowed upon its work, and believes that the longer the instrument as it now stands is tried by time, the more universal will be its use—the larger the number to acknowledge that even-handed justice to both OWNER and the BUILDER is conserved.

The publishers report the sales during the last year as largely in excess of the year previous. And still there are cities and districts in which this contract is hardly known and seldom used. The propriety of enumerating all the reasons for this tardiness to substitute the better contract, in this place, by us, might be questioned, but one, and we believe the principal one of them, we will mention, and trust to being pardoned for so doing.

The fault lies with the builder and his neglect of business of the most vital importance to him.

In cases where both parties to the contract are fair-minded men, and no unusual conditions occur during the prosecution of the work, a simple memorandum, giving the names of the contracting parties, the work to be performed, the time it is to be completed and the sum to be paid therefor, may suffice. But experience has shown that under the various circumstances apt to arise, a different document is necessary. Some fault has been found with the form prepared as being too long, and still no clause therein has been proved superfluous during the three years of trial and experience now had. Nor has a material improvement been suggested by either architect or builder or lawyer which necessitates amendment to the original document as yet.

The Joint Committee representing the American Institute of Architects and the National Association of Builders has therefore not been called together during 1890.

In conclusion, your committee desires to urge upon you all, gentlemen, and upon the builders of the country represented by you, the fact that you are in each case one of the parties to the contract, and as such have a right to choice of form to be employed, and that, in the judgment of your committee, your interests will be better served at all times by insisting on the use of the Uniform Contract.

Respectfully submitted,
GEORGE C. PRUSSING,
ARTHUR MCALLISTER,
MARC EIDLITZ.

Secretary Sayward suggested that in certain cities the Uniform Contract adopted by the association was the only one in use, and that it would be well to hear from these cities. Mr. Walsh, of Baltimore, said that it was universally employed by the architects of the city he represented. Mr. Hamilton, of Pittsburgh, and George, of Detroit, and many others made the same statement.

Mr. Lovett, of Kansas City, moved the adoption of the report, seconded by Mr. Alsip, of Chicago. Mr. Terrill, of San Francisco, rose to present the California view of the contract. It was not used anywhere in that state, he said, and was not in conformity with the laws or court decisions of California, and was indorsed by the several local associations of builders. Quite a different form was employed by the architects, including some clauses not in the Uniform Contract and altogether better suited to their conditions. He read several extracts from the contract in vogue there, and stated that these should be incorporated into the standard form. He stated that the form used had not been approved by the San Francisco Chapter of the American Institute of Architects, but that they had found a back door to crawl out through by saying the contract was not a matter with which they were concerned, and therefore would take no action either way.

After a general discussion, George C. Prussing, of Chicago, said the contract had been worded in the most general way possible, and if the gentleman had anything more comprehensive to suggest the committee would be glad to consider it. It was further supported by A. S. Reed, of Wilmington; Thomas J. King, of Washington; C. A. Rupp, of Buffalo; J. F. Walsh, of Baltimore, and M. D. Madden, of Chicago. On motion of Mr. McGilvray, of Denver, seconded by Mr. Terrell, of San Francisco, the report was adopted.

The report of the standing committee on Builders' Surety Company was next taken up. It was as follows:

REPORT OF THE COMMITTEE ON BUILDERS' SURETY COMPANY.

To the National Association of Builders in Fifth Annual Convention assembled:

GENTLEMEN: Your Committee on Builders' Surety Company, having carefully considered the subject referred to them, and after numerous sessions extending through the last two years, during which they have had the advantage of the coöperation and advice of some of the best lawyers and insurance actuaries of various cities, are compelled to reach as a conclusion of their labors the following:

That, while we firmly believe such a company would be desirable and advantageous to the building fraternity, nevertheless it is impracticable and inexpedient for the National Association or its affiliated bodies, as such, to be connected with such an organization.

We therefore offer the following resolution:

Resolved, That the formation of a Builders' Surety Company, under the auspices of the National Association of Builders, is not advisable, and that the committee be and is hereby discharged from the further consideration of the subject.

ARTHUR MCALLISTER, JOHN S. STEVENS,
JOHN J. TUCKER, EDWARD E. SCRIBNER,
GEORGE C. PRUSSING, W. H. SAYWARD.
J. MILTON BLAIR,

The report was not discussed, and, upon motion, was adopted, together with the resolution, and the committee discharged.

W. H. Gorsline offered the following resolution, moving that it be referred to the Committee on Resolutions:

Resolved, That the National Association of Builders assembled in annual convention, do hereby indorse the action of the architectural associations in framing and introducing such legislation (the registration of architects) as will tend to secure to the people a more correct architectural practice, and we would moreover recommend all affiliated bodies to aid such legislation in every possible way.

Resolved, That copies of the foregoing be sent under seal of the association and signature of its president and secretary to the bodies interested, in the State of New York, praying for the speedy enactment of the measure.

This was ordered, but subsequently when reported favorably upon by the committee on resolutions, it was rejected by the convention by a vote of 23 to 51, the principal argument used by a delegate from Boston being to the effect that "architects never favor us and why should they come and ask favors from us." After several other resolutions, that were lost or tabled, being presented, the session adjourned.

FOURTH DAY—AFTERNOON SESSION.

The first business in order after assembling was the consideration of the report of the committee on resolutions, which was submitted through T. J. Hamilton, of Pittsburgh, chairman.

In regard to the resolution of A. G. Doran, of Grand Rapids, the committee's report that in their judgment affiliated bodies should formulate such rules as would be acceptable to themselves, was adopted.

The committee recommended the adoption of the resolution presented by Mr. Smith, of Omaha, which was as follows:

WHEREAS, The labor of convicts has been frequently utilized in such manner as that the result of the same is brought into competition with the result of the labor of citizens of various cities represented in this convention; and

WHEREAS, Many individual members of affiliated bodies of this association are compelled to compete against such labor; be it

Resolved, That the National Association of Builders demands that when such labor is used, the price of the result, whether expressed in material or otherwise, shall be fixed by the authorities controlling the same at the current prices of the market; and

Resolved, That the officers of the National Association he and are hereby directed to convey this vote to the attention of the legislatures of all the states represented in this body.

This portion of the report was adopted.

The committee recommended the adoption of the resolution presented by John D. McGilvray, of Denver, recommending the establishment of some definite plan of an apprenticeship system, and the establishment of trade schools, etc., and recommending its adoption by filial bodies.

Mr. McGilvray having added to this, "that we use every means in our power as exchanges to promote the cause of manual and technical education," and added to this by Mr. Deeves, of New York, "that we urge upon the legislatures of each state to provide schools for industrial education of the American youths," the measure was adopted.

The committee on time and place of next convention reported through Mr. Smith, of Omaha, recommending the city of Cleveland, Ohio, and that the convention be held there beginning on Monday, January 18, 1892, which was agreed to, and Cleveland was selected as the next place of meeting.

The committee to report on nominations of officers reported recommending Mr. Arthur McAllister, of Cleveland, for president; Mr.

Anthony Ittner, of St. Louis, for vice-president; Mr. Ira G. Hersey, of Boston, for second vice-president; Mr. George Tapper, of Chicago, for treasurer, and Mr. William H. Sayward, of Boston, for secretary. On motion the report of the committee was received, and one of the assistant secretaries was authorized to cast one ballot of the association for the gentlemen nominated, which was done, and they were declared duly elected as officers of the association for the ensuing year.

The following were then nominated and duly elected directors for the ensuing year: E. L. Bartlett, Baltimore, Md.; James I. Wingate, Boston, Mass.; William D. Collingwood, Buffalo, N. Y.; George C. Prussing, Chicago, Ill.; James M. Blair, Cincinnati, Ohio; C. C. Dewsteo, Cleveland, Ohio; Robert E. Greenleaf, Denver, Col.; Warren G. Vinton, Detroit, Mich.; George C. Zwerk, East Saginaw, Mich.; H. M. Reynolds, Grand Rapids, Mich.; James E. Twimele, Indianapolis, Ind.; William A. Kelly, Kansas City, Mo.; J. M. Struck, Louisville, Ky.; P. S. Curry, Lynn, Mass.; Charles E. Conant, Lowell, Mass.; Charles F. Kindt, Milwaukee, Wis.; George W. Libbey, Minneapolis, Minn.; Marc Eidlitz, New York, N. Y.; N. B. Hussey, Omaha, Neb.; H. F. Meintz, Peoria, Ill.; Stacy Reeves, Philadelphia, Pa.; Robert W. Jackson, Portland, Me.; Thomas J. Hamilton, Pittsburgh, Pa.; Frederick C. Markham, Providence, R. I.; E. P. Fish, Pueblo, Col.; H. H. Edgerton, Rochester, N. Y.; John DeClure, St. Joseph, Mo.; William N. Miller, San Francisco, Cal.; William M. Anderson, St. Louis, Mo.; Edward E. Scribner, St. Paul, Minn.; Frank Clark, Sioux City, Iowa; Henry F. Crawford, Syracuse, N. Y.; B. H. Warner, Washington, D. C.; A. L. Johnson, Wilmington, Del.; H. E. Eddy, Worcester, Mass.

On motion of Arthur McAllister, of Cleveland, Ohio, a recommendation of the Board of Directors that the pro rata assessment for the ensuing year be $3 per capita, was adopted.

On motion of Mr. J. Milton Blair, of Cincinnati, the convention expressed its desire that hereafter filial bodies will only make provision, whenever the convention is held in their city, for the entertainment of delegates and alternates, without taking into consideration the visiting members who may be present. On motion of Mr. George C. Prussing, of Chicago, it was declared the sense of this convention that a committee of five be appointed by the chair to take into consideration the advisability of taking action on the subject of the various lien laws of this country, and to report at the next convention.

Resolutions of thanks to the New York Builders' and Traders' Exchange, to the Building Trades' Club, and to the press, were adopted. Col. Richard D. Auchmuty sent a note, which was read by the secretary, thanking the convention for the honor conferred upon him in electing him an honorary member of the association, and stating that he regarded it as an expression of approval of his work in the New York Trade Schools.

The secretary announced that the hours of work in various cities, as communicated to him by the chairmen of the different delegations, were as follows:

Baltimore, 9 hours; Boston, 9 hours; Chicago, 8 hours; Rochester, 9 hours: Kansas City, 9 hours and 10 hours, and paid by the hour; Milwaukee, 8 hours, 9 hours and 10 hours; New York, 8 hours generally, though plumbers, masons and bricklayers work 9 hours; Philadelphia, 9 hours; Mill workers, 10 hours; Syracuse, masons and stonecutters, 9 hours, others 10 hours; Cincinnati, 9 hours, with 8 hours on Saturdays; Cleveland the same; Grand Rapids, masons, 9 hours, others, 10 hours, Saturdays 9 hours, paid by the hour; Lowell, 9 hours, with the exception of carpenters, some of whom work 10 hours in summer and 9 hours in winter, all paid by the hour; Minneapolis, 9 hours, with the exception of carpenters who work 10 hours, and paid by the hour; Providence, stonecutters, 8 and 9 hours, plasterers 9 hours, all others 10 hours, paid by the day; Pittsburgh, 9 hours, with the exception of tile setters, who work 8 hours, marble cutters, 10 hours, all paid by the hour; St. Louis, 8 hours in all trades on buildings, May 1, the carpenters demand 8 hours at $3.20 per day; all are paid by the hour at present; Washington, 9 hours, with 8 hours on Saturdays, and stonecutters work 8 hours; Buffalo, generally 9 hours, paid by the hour; Detroit, 9 hours, except stonecutters who work 8 hours, some are paid by the hour and some by the day; Denver, 8 hours almost entirely, but the planing mills work 10 hours, they are all paid by the hour, stonecutters 4 hours on Saturdays, paid by the hour; Indianapolis, 8 hours, planing mills 10 hours, paid by the hour; Louisville, Kentucky, bricklayers, stonecutters and stone masons work 9 hours, union carpenters 8 hours, others 10 hours, paid by the hour; Omaha, about one-half work 8 hours and the others 9 hours, paid by the hour; Portland, Maine, carpenters, plasterers and masons 9 hours, all others 10 hours, paid by the hour; St. Joseph, carpenters and plasterers 10 hours, others 9 hours, paid by the hour; San Francisco, 8 hours, a few 9 hours, those mills which are getting out building material 9 hours, and those who are making doors, sashes and blinds 10 hours, paid by the day; Lynn, 9 hours; Worcester, 9 and 10 hours; Peoria, 9 hours; Wilmington, carpenters work in the summer 9 hours, others 10 hours, in the winter carpenters all work 9 hours, and paid by the hour; St. Paul, 8 hours for carpenters, stonemasons and painters; bricklayers 9 hours.

Mr. A. M. Kuhn, of Indianapolis, offered the following resolution, which was adopted by a rising vote:

That the thanks of this convention are hereby heartily tendered to Mr. John J. Tucker for the able, kind and courteous manner with which he has presided over the deliberations of this convention, and for his labor in behalf of the National Builders' Association.

On motion of Mr. John D. McGilvray, of Denver, a vote of thanks was tendered to the secretary and other officers of the association for their efforts and labors in behalf of the organization the past year.

The convention then adjourned, to meet at the Builders' Exchange, Philadelphia, at 3:30 Friday afternoon, and formally met and adjourned sine die at the Building Trades Club, New York, on the following day.

The concluding features of the convention were important and interesting. The banquet at Lenox Lyceum was a pronounced success. William C. Smith, president of the Mechanics' and Traders' Exchange of the City of New York, presided. Among the architects present were: William Worth Carlin, of Buffalo, William Rutherford Mead, James Renwick, Leopold Eidlitz, F. H. Kimball, R. H. Gibson, C. L. W. Eidlitz, W. B. Tuthill, J. L. Aspinwall, George B. Debevoise, A. F. D'Oench, David Jardine, C. W. Romeyn, James E. Ware, William Schickel, J. C. Cady, T. Hill Smith, Albert Wagner, George Edward Harding, of New York, and J. Foster, of Baltimore.

The toasts were as follows: "Our Country," by Grover Cleveland; The State and City of New York," by Acting Mayor J. H. V. Arnold; "Our Guests," by Arthur McAllister, president of the National Association; "Education, Professional and Industrial, or the Builder of the Future," by Gen. Alexander S. Webb, President of the College of the City of New York; "Arbitration," by the Rev. James M. King, D. D.; "Architecture," by Montgomery Schuyler, and "Our Sister Exchanges," by John S. Stevens.

On Friday six hundred delegates and visitors visited Philadelphia as guests of the National Association of Builders, to inspect the Master Builders' Exchange, which is the most thoroughly equipped of all the exchanges in the country, and to investigate the workings of the trade school under the supervision of the master builders. The delegates were brought from New York on a special train. Upon arrival they were escorted to St. George's Hall by Charles H Gillingham, where a dinner was tendered them.

The party then went to the Builders' Exchange, where a formal meeting of the National Association was convened, with President Tucker in the chair. After a brief address he introduced George Watson, of the Philadelphia Exchange, who welcomed the visitors to the city and to the exchange. Charles H. Gillingham, the next speaker, reviewed the history of the Philadelphia Exchange, its triumphs and trials, gave a concise statement of its financial condition, outlined the policy and workings of the exchange, the method of management and the trade school.

Secretary Sayward, John S. Stevens, of Philadelphia, President George W. Hunt, of the New York Board of Education, and George W. Debevoise, of New York, followed with addresses touching upon the trade school system and the builders' exchanges. The delegation then visited the trade school and returned to New York at 9 o'clock.

The convention met at 20 East Twenty-first street on Saturday morning, and after attending to routine business finally adjourned.

Our Illustrations.

Residence for Mr. E. Mandel, Chicago. L. B. Dixon, architect.

Residence for Mrs. Babcock, Kenilworth, Ill. George W. Maher, Chicago, architect.

Ingleside Club House, Evanston, Ill. Irving K. Pond, Allen B. Pond, Chicago, architects.

Residence for Mr. J. W. Howell, Ingleside, Ill., Irving K. Pond and Allen B. Pond, Chicago, architects.

Three competition designs for Odd Fellows Hall, Cincinnati. Design and plans by Samuel Hannaford & Sons; design and plans by A. O. Elzner; design and plans by Crapsey & Brown, all of Cincinnati. This represents a rather peculiar competition. In a first competition fifteen designs were submitted, but all were rejected. To this competition the Elzner design belongs. Of these fifteen for a second competition four of the contestants were selected: Samuel Hannaford & Sons and Crapsey & Brown, of Cincinnati; W. M. Walter, of Chicago, and S. M. Holden, of Brooklyn, N. Y. Each of the unsuccessful architects received a consolation fee of $250, and Samuel Hannaford & Sons were selected as architects and superintendents. In the latter design the first story contains stores and the auditorium, to seat one thousand; the second contains offices and gallery of auditorium; third, fourth, fifth and sixth stories are substantially alike, furnishing one large lodge room and one encampment room, with stage, ante rooms, dressing rooms and parlor; also two small lodge rooms 23 by 31 feet. Street fronts of these floors given entirely to offices. Seventh story is devoted entirely to the purposes of the order, and contains large lodge room, 35 by 50 feet, with ante rooms; also four lodge rooms, a banquet hall, with ladies' and gentlemen's parlor, etc. On every office floor is a fireproof vault built up from the cellar floor. Cost about $250,000.

PHOTOGRAVURE PLATES.

(*Issued only to subscribers for the Photogravure edition.*)

Saturn Club House, Buffalo, N. Y. Marling & Burdett, architects.

Residence of G. B. Shaw, Chicago. Charles S. Frost, architect.

Residence of R. T. Crane, Chicago. Charles S. Frost, architect.

View in Saturn Club House, Buffalo, N. Y. Marling & Burdett, architects.

Temple Beth Zion, Buffalo, N. Y. E. A. & W. W. Kent, joint architects.

Main Entrance, Temple Beth Zion, Buffalo, N. Y. E. A. & W. W. Kent, joint architects.

View in Temple Beth Zion, Buffalo, N. Y. E. A. & W. W. Kent, joint architects.

Mosaics.

Architects Wechselberger & Reeves, Peoria, Illinois, moved their offices, February 1, into the new Y. M. C. A. building.

Mr. A. W. Cobb having withdrawn from the firm of Stevens & Cobb, architects, of Portland, Maine, the business will be continued by John Calvin Stevens, Oxford Building, Portland.

Appleton's weekly, *In the Swim*, special European edition, under date of February 14, has reached The Inland Architect table. It is a handsome number, printed in the best style of the "art preservative," and on an excellent quality of cream-tinted paper. On the title page is given a superb reproduction of the Auditorium building, and elsewhere a number of selected views of noted American scenery,

that are artistically engraved. These, with excellent reading matter of which the coming World's Fair receives its due share, comprise the salient points of the number.

I. TOMLINSON, of Chicago, for many years known to architects as a manufacturer of interior finish, is now manufacturing and dealing in hardwood lumber, under the firm name of I. Tomlinson & Co. (I. Tomlinson, E. Heath and R. T. Whitbeck), at 101 Washington street with yards at Twenty-second and Laflin streets.

A VERY successful tableau entertainment was recently given in New York, the subjects being taken from illustrations in the current magazines. The idea is a simple one, and if the subjects are well chosen it can be made very interesting. The Century Company has prepared a list of suitable pictures, with suggestions, for anyone who wishes to get up the entertainment. They will send it free, on request.

THE design for a railway station at Detroit by James Stewart & Co., of St. Louis, published in the August number of THE INLAND ARCHITECT, was recently republished by the *British Architect*, with the following comment: "We have selected this subject for illustration, for it appears to us one of the most successful of those modern American designs which are founded on a study of Romanesque work. The outline and massing are very successful, and the proportions of the various parts have not that glaring inconsistency which so spoils such American designs, and was a great blot on much of the late H. H. Richardson's work. A comparison of the dormers in this design is not quite satisfactory." It is pleasant, as in the present case when the judgment is wholly satisfactory, to "see oursels as ithers see us." The sketch from which the design was published is extremely creditable to Oliver C. Smith, whose delineations have become familiar in connection with much good work.

Synopsis of Building News.

Buffalo, N. Y.—Architect J. G. Balsam: For E. W. Clement, a two-story residence, size 25 by 62 feet, pressed brick; cost $8,000.

Architect William Lansing: For the Church of the Ascension, a two-story frame rectory, size 38 by 60 feet; cost $9,000.

Architect J. G. Balsam: For A. A. Crandall, a two-story frame residence; cost $7,000.

Chicago, Ill.—Architects Treat & Foltz: For The Arc Light & Power Company, on Washington street, near the river, building to be remodeled and made entirely fireproof. They are also preparing plans for a ten-story apartment house, 105 by 200 feet in size, to cost $500,000. It will be erected on Thirty-ninth street, extending to Oakwood boulevard. The front will be of pressed brick and terra-cotta, the interior finished in hard woods, with marble wainscoting, tiled floors, steam heat, electric light, six elevators, and all the sanitary and modern improvements. It will contain seventy-five first-class seven-room apartments, billiard room, café, barber shop, etc. For the Board of Underwriters they are making plans for a three-story building, 25 by 116 feet in size, to be erected on Peoria street, near the present fire patrol building. They also made plans for six three-story and basement flat buildings, to have a frontage of 130 feet on Vernon Park Place. The front will be of pressed brick, stone and terra-cotta, and all the sanitary and modern improvements will be put in. For John C. Heinig they planned a four-story flat building, 23 by 65 feet in size, to be built on Chestnut street.

Architect S. S. Beman: For the Michigan Trust Company, Grand Rapids making plans for a ten-story office building, 83 by 130 feet in size; cost $300,000. It will have two fronts of pressed brick and stone, hardwood interior finish and all the improvements. For the Chicago Medical College, Dearborn street near Twenty-fourth, he is working on plans for a four-story and basement building, 106 by 110 feet in size, of pressed brick and brownstone front; cost $100,000. For John M. Clark, on South Canal street, he is making drawings for a seven-story and basement warehouse, 50 by 80 feet in size; to be of pressed brick and brownstone; cost $40,000.

Architect Clinton J. Warren recently purchased a building on 45 to 47 River street, which he will remodel, add two stories and make into a modern office building. He will put in steam heat, electric light, elevators, marble and tile work and all the improvements.

Architect August Maritzen: For the National Turnverein, corner of Eleventh and Laflin streets, a two-story and basement turn hall of handsome design, 100 by 105 feet in size; cost $50,000. It will be built of pressed brick and terra-cotta with rockfaced stone basement, hardwood interior, steam heat, electric light, marble and tile work and all the improvements. He is also making drawings for a five-story brewery to be erected at Mobile, Alabama, for the Mobile Brewing Company. It will have a handsome front of pressed brick and stone and tower 125 feet high. They will put in electric light and all the latest improvements; cost $125,000.

Architect L. B. Dixon: For T. F. Rice, on Lake avenue near Thirty-ninth street, a block of five-story flats, with a frontage of 250 feet, of pressed brick, stone and terra-cotta; interior to be finished in hard wood, have steam heat, electric light and all the sanitary improvements.

Architect John T. Long: For F. G. Springer, a block of eleven two-story and basement residences, to have a frontage of 268 feet on Calumet avenue, between Thirty-eighth and Thirty-ninth streets. The fronts will be of Tiffany pressed brick with Portage stone trimmings.

Architects Furst & Rudolph: For George Armour Estate, one additional story on building corner of Adams and Franklin streets, terra-cotta, elevators, vaults, etc.; cost $75,000. For L. P. Kadish Estate, on Wabash avenue near Twenty-third street, a four-story building; cost $85,000. It will contain a natatorium—two basins 35 by 110 feet in size, one for women and the other for men; besides these there will be in the front building three stores and apartments above; the building will be heated by steam, have electric light and all the modern improvements. For A. Zeese they planned a three-story store and flat building to be built corner of Fifty-eighth and Halsted streets. The front will be of pressed brick and stone with copper bays.

Architects Thomas & Rapp: For G. D. Holton, on Drexel boulevard near Forty-third street, a residence; cost $25,000. For I. M. Williams, corner of Fifth avenue and Monroe street, a one-story addition and remodeling of building; cost $20,000. For G. Eager, of Cincinnati, Ohio, two four-story warehouses on Shields avenue and Twenty-seventh street; cost $25,000. They are also preparing plans for the high school to be erected at Oak Park.

Architect Julius H. Huber: For B. F. Weber, ten two-story residences of frame with stone basements, hardwood interiors, furnaces and all the improvements; cost $6,000 each; to be built at High Ridge. For Zero Marx, on Superior street near Wells, a four-story and basement factory, 100 by 50 feet, of pressed brick and stone, with elevator, steam heat, electric light.

Architect John Addison: For a Boston estate, making sketches for remodeling building at Riverside; pressed brick and stone; cost $20,000. For J. Gordon, on Belden avenue, a two-story residence. For Stewart Estate, at Marquette, he is making plans for changing an apartment building into a private hotel; steam heat, electric light, marble and tile work, etc.

Architect Oliver W. Marble: For Warren Springer, eight-story warehouse, 40 by 160 feet; cost $200,000; pressed brick and terra-cotta front, steam heat, elevators, electric light, marble and tile work, etc.; to be built on South Canal street, near Jackson. For I. S. Smith, on South Park avenue and Thirty-fourth street, a stone front residence; cost $15,000. For Joseph P. Wathier, on Monroe street, near Ashland avenue, a flat building; cost $16,000. For John W. Eckhart, on Monroe street, near Lincoln, a two-story residence. For S. Klein, on Ashland boulevard, near York, a three-story residence; cost $16,000. For the Alaska Fur Company, on State street, making plans to remodel stores, steam heat, electric light, marble work, etc. He is also making plans for remodeling four-story building on Monroe street into eight-story warehouse, terra-cotta, tile front, steam heat, elevators, electric light, etc. He will make plans for four-story apartment house; cost $100,000; to be erected on University Place and Cottage Grove avenue.

Architect J. H. Wagner: For W. D. Ewart, remodeling and additional story to building on Jefferson street, between Randolph and Washington. Also five-story addition, 114 by 76 feet, pressed brick and terra-cotta, steam heat and power, electric light, elevators, iron and steel beams, etc.; cost $70,000. For Lidgerwood Brothers, of Minneapolis, a five-story building of St. Louis pressed brick and stone, steam heat, electric light, steel construction, etc. He also planned a steel arch bridge, 80 feet span, 26 feet roadway, 7 feet sidewalks, masonry abutments, etc.

Architects Crowen & Richards: For L. C. May, of Kansas, a three-story apartment building, 175 feet front, on Twenty-sixth and West Fortieth streets; red sandstone and ornamental pressed brick and iron work, steam heat, electric light, copper and marble work and all the improvements; cost $60,000. For Mrs. B. Ringon, Sixty-first and State streets, a four-story flat building; cost $23,000; pressed brick, stone and iron, oak and Georgia pine finish, electric light, etc.

Architect A. Druiding has just sent out plans for a frame Catholic Church, to be erected at Traverse City; hardwood finish, stained glass, furnace, etc.; cost $14,000.

Architect J. L. Silsbee: For W. H. Bartlett, at Evanston, a two-story, basement and attic residence, 40 by 80 feet, of stone all round, and two-story stone barn; hardwood interior, furnace and all the sanitary etceteras.

Architects Huehl & Schmid: For the Prussing Vinegar Company, a three-story factory, 100 by 106 feet, steam heat, electric light, etc.

Architect D. S. Pentecost: For Dr. Sara L. Valentine, residence at 2340 Prairie avenue, of Georgia marble front; cost $30,000. For the Doctors Valentine, on Lyons avenue, fifteen two-story flats; cost $50,000.

Architect H. B. Seely: For W. W. Cole, of New York, a ten-story fireproof warehouse, 88 by 154 feet, on South West corner of Fifth avenue and Jackson street; elevators, steam heat, electric light, marble and tile work; cost $250,000.

Architect R. C. Berlin is making plans for a block of nine two-story stores and offices, 275 feet frontage by 100 feet deep; to have steam heat, electric light, hardwood finish, etc.; to be built at La Salle, Illinois.

Architect Perley Hale: For H. A. & C. A. Chapin, on Sherman street south of Van Buren, a four-story hotel, of blue Bedford stone.

Architect Robert Rae: For Louis Steinfeld, on Cottage Grove avenue, near Forty-first street, a seven-story apartment house, 100 by 100 feet, of Anderson pressed brick, stone and terra-cotta, steam heat, elevators, electric light, etc.; cost 200,200. He is also working on drawings for a ten-story hotel, 100 by 200 feet, on Sixty-third street and Stony Island avenue; elevators, steam heat, electric light, marble and tile work, slate roof, pressed brick, stone and terra-cotta front; to be of steel construction and cost $500,000.

Charleston, S. C.—City Assessor William Aiken Kelly has just completed a statement of the number of permits issued for the erection of new buildings, and old buildings improved, in Charleston during the past year. The statement is as follows:

NEW BUILDINGS.

105 permits, reported cost		$329,775
Classified as follows:		
8 stores, reported cost		$ 61,650
6 warehouses, reported cost		18,950
2 terminal railroads, cotton press warehouses and wharves combined, reported cost		159,000
3 churches, reported cost		25,800
86 dwellings, reported cost		64,375
105	Total	$329,775

OLD BUILDINGS IMPROVED.

98 permits, reported cost	$60,910

TOTAL OF NEW BUILDINGS AND IMPROVEMENTS.

New buildings, 105 permits, reported cost	$329,775
Old buildings improved, 98 permits, reported cost	60,910
Total, 203 permits	$390,685

Chattanooga, Tenn.—Architects Lamb & Hunt: For the Hospital Association, a $100,000 hospital building.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

The open winter here has allowed many buildings to be pushed toward completion, which is satisfactory to the contractor and owner alike. From present indications I think I can safely make the assertion that there will be no strikes this spring. Let us hope that such a happy condition in building circles may exist. There is also a very healthy indication that next season will be a busy one, and the feeling is general that our city will enjoy a boom of a solid nature.

Our Builders' Exchange is going to have a birthday party in March. It will have to, as it were, pay full fare now, for, at the age of thirteen, knee-breeches and jackets are generally discarded and the child is supposed to look a little upon life as a reality. Our exchange has been well raised and is accustomed to all the usages of good society, the result of which is its recognition as a representative mercantile body. Pertinent discussions and actions have made themselves felt, and the value of builders' exchanges can be no longer discounted or questioned.

Cincinnati joins Chicago in mourning over the death of John W. Root. Our architects cherish many happy recollections of pleasant and profitable hours spent in his company. The writer himself recalls with pleasure a short acquaintance with Mr. Root, during his visit to the National Exhibition of Architectural Drawings, held in this city over a year ago. *Requiescat in pace.*

Our architects seem loth to tell all they know this month, and although they are reasonably well engaged, yet the report of improvements is short.

Architects Samuel Hannaford & Sons report: For the I. O. O. F., a lodge building, a description of which will follow later on, upon publication of perspective and plans. For Frederick Alms, an apartment house; materials: pressed brick, iron, steam heat, terra-cotta, slate roof, elevators, tile flooring, etc.; cost $50,000.

Architect H. E. Siter reports: For Amos Shinkle, of Covington, Kentucky, a block of brick buildings, eleven in number; materials: brick, slate roof, plumbing, plate glass, wood mantels, etc.; cost $30,000. Residence for Charles H. Duhme; materials: stone, tile roof, furnace, stained glass, tile floors, dumb waiters, etc.; cost $25,000. The beautiful English gothic window is quite a feature in its construction. A fuller description will appear upon the publication of a perspective.

Architects Aiken & Ketchum are making fine progress in the remodeling and refinishing of Christ Church, and when done the church will be a most beautiful one, a credit to architects and city alike.

Architect W. W. Franklin reports: For Dr. A. B. Thrasher, a residence; materials: stone, slate roof, hardwood finish, stained glass, electric bells, plumbing, gas, wood mantels, etc.; cost $12.000. Residence for Joseph Taylor; materials: brick, furnace, plate and stained glass, hardwood blinds, plumbing, mantels, etc.; cost $7,000.

Architect John H. Boll reports: For Mr. C. H. Bennett, of the Bennett & Peck Manufacturing Company, a residence; materials: brick, stone, furnace, plate and stained glass, slate roof, hard wood, mantels, plumbing, gas and blinds; cost $8,000.

Architect Theodore Richter, Jr., reports: For House of Refuge an addition to present buildings; materials: brick, stone, iron shutters, steam heat, bells, tin roof, grates, gas, plumbing, blinds, etc.

Architect Adam J. Bost reports: A tenement house for George Metz; materials; brick, stone, plate glass, tin roof, grates, mantels, gas and plumbing; cost $6,000.

Architect G. & A. Brink report: For E. H. Laager, a tenement house; materials: brick, iron, plate glass, tin roof, grates, mantels, plumbing, etc.; cost $7,000.

Architect George W. Vogel, 5 West Fourth street, reports: A warehouse for Benjamin Hey; materials: brick, stone and iron; elevator, tin roof, plumbing, gas, etc.; cost not given. For Benjamin Hey, stores and flats; materials: brick, iron, iron stairs, fire escapes, elevator, grates, pine finish, plumbing, mantels, etc.; cost $25,000. For F. C. Miller, 165 East Pearl street, a residence; materials: stone, furnace, slate roof, hardwood finish, grates, mantels, plumbing, gas, etc.; cost $20,000.

Architect Charles Diss, Vine and Calhoun, reports for F. Rehse, 418 Main street, a residence; materials: frame, slate roof, grates, mantels, hardwood, gas, plumbing, blinds, etc.; cost $7,000.

Architect William, Otter & Dexter, of Dayton, Ohio, report for Mrs. Sarah L. Hamilton, Oak and Lane streets, Walnut Hills, Cincinnati, a residence; materials: brick, stone, furnace, plate and stained glass, bells, gas, plumbing, dumb waiters, hard wood, mantels, blinds, etc.; cost $10,000.

Cleveland, Ohio.—Architect George F. Hammond: For James Gibbons & Co., a three-story brick barn, size 57 by 97 feet; cost $10,000.

Architects Cramer & Fugman: For John Wetzel, three stores and tenement buildings, size 40 by 55 feet, brick; cost $15,000; contractor, John Schenk. For Mrs. J. H. Lowrey, a two-story frame dwelling, size 24 by 42 feet; cost $3,000.

Architect A. W. Rust: For C. A. Crumb, a three-story frame dwelling, size 35 by 52 feet; cost $4,500.

Valentine Koenig will build a two-story frame store, size 24 by 73 feet; cost $4,150; W. Kuhm, contractor.

G. N. Norfolk will build a two-story frame dwelling, size 30 by 44 feet; cost $4,000.

106 permits for new frame buildings	$77,055
4 permits for new brick and stone buildings	26,020
69 permits for alterations in buildings	20,622
179 Total	$123,697

Denver, Colo.—S. L. Holzman is having plans prepared for an eleven-story office building to cost about $300,000.

Architect M. E. Burdell will erect three two-story brick dwellings; cost $12,000.

Architect F. C. Eberly: For the Blatz Brewing Company, a brick storehouse; cost $16,000.

Detroit, Mich.—Architects Malcombson & Higginbotham: For Mrs. Agnes Inglis, a two-story residence, brick with cut stone trimmings and slate roof; cost $5,000. For Charles E. Bresler, Grosse Pointe, Michigan, a three-story residence, size 40 by 60 feet, pressed brick, cut stone trimmings, slate roof; cost $40,000.

Architects E. A. Walshe & Son: For Robert J. Wilson, ten two-story residences on Farnsworth street, frame; cost $30,000.

Architects Spier & Rohn: For the B. Stroh Brewing Company, additions to brewery, a 60 by 100 feet bottling house, and 25 by 70 feet stock house, three stories high, brick and fireproof construction; cost $80,000.

Architects Mortimer L. Smith & Son: For the Western Club, a two-story club house situated on Fort street west, between Twenty-third and Twenty-fourth streets, brick with slate roof; cost $8,000; contractors, Teakle & Golden.

Architects A. C. Varney & Co.: For F. Julien, a three-story brick residence on Forrest avenue; cost $5,000.

Architect George E. Depew: For T. H. Myers, Brook, Canada, a two-story brick residence with stone trimmings; cost $5,000.

Architects Van Leyen & Hackett: For A. J. Van Leyen, a two-story frame residence, size 28 by 50 feet; cost $5,000; contractors, Sicklesteel & Duffy. For Hugh McKenzie, a two-story frame residence, size 26 by 47 feet; cost $4,500.

Architects Donaldson & Meier: For the Brush Estate, an eight-story hotel situated on northeast corner of Randolph and Croghan streets; cost $80,000.

Duluth, Minn.—Architects McMillen & Radcliffe are preparing plans for a new church for the Methodist Episcopal congregation.

A new hotel will be erected here in the spring, at a cost of about $35,000.

Grand Rapids, Mich.—Architects E. E. Meyers & Son, of Detroit, have been awarded the contract for the new police court building. It will be two-stories, red brick, and cost $40,000.

Kansas City, Mo.—Building is not booming here, but some good work will be done in the spring.

Contracts will be let at an early date for the erection of the following buildings:

Architect J. J. Green: Brick residence, between Troost and Harrison streets, on Twelfth, 25 by 60 feet, two stories, modern conveniences; cost $4,000.

Architect Patrick Cogan: Brick residence on Anderson avenue near Colorado avenue, 20 by 32 feet, two stories, modern conveniences; cost $2,500.

Architect George Weschusen: Two brick residences on Woodland avenue, between Fifteenth and Sixteenth, 19 by 40 feet, two stories; cost $2,500 each.

Brick business and office block, southwest corner Seventh and Delaware streets; 180 by 129 feet, nine stories; cost $330,000.

Brick business and office building at the northeast corner of Eighth and Wyandotte streets; 92 by 66 feet, three stories; cost $70,000; all modern conveniences; Boston Building Company. The members of the company are: George Hoffman, E. A. Fussell, Charles F. Emery, Kansas City; Theodore Ackerman, Russell, Kansas; E. A. Batchelder and Stedman Kellogg, Boston, Massachusetts.

Brick church, corner Sixth and Tracy avenues; 50 by 60 feet; cost $4,000; Children's Memorial Lutheran Church, Rev. Frank D. Altman, pastor.

Brick and stone Masonic temple, ten stories, 224 by 114 feet; cost $500,000; Hackney & Hamilton, architects; E. F. Allan, secretary board of directors. This building will contain 141 office rooms. The first two stories will be of Missouri granite trimmed with brown sandstone facings, and the other stories will be constructed of pressed brick with sandstone and terra-cotta trimmings. The highest point will be 224 feet from the ground, and the cornice will be 124 feet high. This building will be erected on the northwest corner of Baltimore avenue and Tenth street.

The bids for the new city-hall building, to be erected at Fifth and Main streets, will be opened March 2 by the board of public works, when the contract will immediately be awarded. The whole structure will cost $300,000, of which amount $79 has already been expended in the foundation.

Plans are being prepared for the following buildings in Kansas City:

Architect S. H. Beregordon: For Linnwood Presbyterian Church, southeast corner Woodland and Linnwood avenues, 35 by 60 feet in size; brick, one story; cost $4,000.

Architect J. W. Dunn will build a business block northeast corner Twenty-fourth and Prospect streets, 24 by 50 feet in size; brick, gravel roof; cost $4,000.

Architect Thomas Conway will erect a brick residence at Holmes street and Gorman avenue, two stories, 29 by 47 feet in size; cost $5,000.

Architect J. C. Patterson has plans for a frame residence at Marshall, Missouri, two stories, 24 by 34 feet in size; cost $4,500.

Architect William Nier: Frame residence at Westport, Missouri, 30 by 40 feet in size, two stories; cost $5,000.

Architect S. E. Chamberlain: Frame residence northeast corner Twenty-seventh street and Jarboe avenue, one story, 16 by 34 feet; cost $2,000; Kansas City School Board, builder.

Brick business block, Twenty-fifth street and Gennesse avenue, 96 by 159 feet in size, two stories; cost $14,000; Kansas City Gas and Coke Company, builders.

Contract for the new City Hall is not yet let, owing to the cost of the building being reduced some $40,000. The structure is to be 150 by 175 feet, four stories, brick and stone, the cost to be about $450,000.

Architect William Wood, Kansas City, Kansas: For the Husted Investment Company, of Kansas City, Kansas, six brick residences, ranging in cost from $3,000 to $8,000.

The beginning of the year 1890 found Kansas City, Missouri, well supplied with residences and business blocks, churches, hotels and theaters, and in the face of this nearly $4,500,000 was expended in more buildings, showing clearly the city's substantial growth, "the supply being governed by the demand." The most noticeable feature in last year's building is improvements in the business portion of the city. A great number of fine business blocks were finished, others were commenced, and many others were remodeled and repaired. The total number of building permits issued during the year was 3,069, and the total cost of the buildings they called for was $3,676,923. Completing buildings whose permits were secured before the close of the preceding year swells the actual amount of building during the past year to $4,500,000.

The sum of $3,000,000 was expended in new buildings in Kansas City, Kansas, during the year 1890, comparing very favorably with the best year's building record in the history of the city. In the main the money was expended in large buildings, business blocks more particularly, ranging in cost from $20,000 to $200,000. The prospects are very favorable for considerable building this year. Already plans are being prepared and contracts are being let for a number of residences in the suburbs of the city, which will give an impetus to the boom in the spring.

Little Rock, Ark.—Architects Rickon & Thompson: For George M. French, Hot Springs, brick veneered store and flats; cost $10,000. For Asa Bragg, a brick residence; cost $6,000. For S. P. Bond, a frame residence; cost $2,000. For W. H. Ragland, a frame residence; cost $6,000. For the Dickenson Hardware Company, a five-story brick warehouse; cost $18,000.

Louisville, Ky.—Architects Drach & Thomas: For the Louisville Gas Company, an electric light plant on Fourteenth and Magazine streets, three stories, size 116 by 145 feet; brick, iron construction throughout, asphalt roof, heated by steam; cost $120,000. For T. Conrad, a block of two-story frame houses on Twefth and Oak streets, size 25 by 34 feet each; cost $12,000. For G. G. Brown and William F. Booker, two frame residences, size 58 by 100 feet; cost $10,100; R. M. Struck, contractor. For the Witta Juma Company, at Witta Juma, alterations and additions; cost $6,000. For F. H. Landrum, three-story residence; size 40 by 60 feet; brick, with stone trimmings, steam heat; cost $8,000. For the Care Hill Cemetery Company, a stone office building, fireproof; size 50 by 79 feet; cost $18,000.

Architect F. B. Piexotta: For W. H. Slaughter, a residence on St. James Court; size 30 by 70 feet; Roman brick, with stone trimmings; cost $8,000. For the Fort Jefferson Land Company, at Fort Jefferson, a frame hotel, size 115 by 115 feet; cost $20,000. For A. L. Lazarus, a block of frame cottages on ninth and Hill streets; cost $27,000. For Mr. C. W. Buck, a brick residence on First street and Ormsby avenue, size 22 by 60 feet; cost $5,000.

Milwaukee, Wis.—Architect F. L. Vogel: For F. L. Ludwig, an $8,000 dwelling.

Minneapolis, Minn.—O. N. Baldwin will erect a $28,000 store and flat building; three-story brick.

Architect Alex. Murray: For Messrs. Murdock & McKenzie, a frame building; cost $16,000.

Mr. Ed. Palmer will erect a three-story apartment house, brick, to cost $32,000.

Plans are being prepared for the following: For George Hoit & Co., a brick dwelling; cost $12,000. For J. H. Thompson, a frame residence; cost $10,000. For E. S. Kendrick, a two-story brick and frame residence; cost $12,000. For J. A. Wright, an addition to the University Avenue Church; cost $4,000.

Omaha, Neb.—Architects Bourgeois & Nitchner have prepared plans for a two-story residence for Mr. George Patterson, brick, stone and frame, with all modern conveniences, to cost about $12,000.

J. H. Van Dorn is at work preparing plans for a large apartment house *à la* Ed. Bellamy. It is to be a four-story brick building, with twenty-five apartments with one large kitchen. We hope it may be carried out and succeed.

Pittsburgh, Pa.—Architect Charles Bickel has plans for a new office building, size 60 by 80 feet; eight-story, granite, with brownstone fronts. Mr. Frank H. Worg will erect a large hotel to cost about $300,000, work to begin in the spring. The South Side Turnverein will build a new $60,000 hall.

Architects Longfellow, Alden & Harlow: For Mrs. E. Schwartz, brick residence in the colonial style. The Standard Manufacturing Company will build a three-story brick warehouse, 90 by 68 feet; cost $50,000.

Architects Alston & Heckert have plans for the following: A two-story frame dwelling, cost $9,000, and a $5,000 M. E. Church parsonage at Bellevue.

Rochester, N. Y.—Architects Jay Fay and O. W. Dryer have designed a fine block of stores and offices for Mr. J. L. Miller, to be built at Seneca Falls, New York. It will be 100 by 70 feet, built of red stone and pressed brick. Will be first-class in every respect; steam heating, A-1 plumbing; cost $19,000. For Mr. Wilmot Castle, a frame residence on Rutger street; cost $4,500. For Mrs. R. Z. Olcott, a residence on Merriman street; stone in first story, frame above. A residence for Mr. Albert Gribbrock; will be stone in first story and half timber above; the filling in half timber will be washed-face brick. The entire interior will be in hard woods of various kinds. In the attic, a very fine billiard room will be fitted up. Cost $9,500. For Mr. H. E. Welcher, a house and stable; cost $7,000.

Many offices report things looking very favorable for the spring, but as yet things are rather indefinite.

Messrs. E. H. Gordon, C. F. Bragdon and W. H. Orchard, have formed a partnership and opened up an architects' office in the Frost building.

Springfield, Ill.—Architect George H. Helmle: For J. Otis Humphrey, two-story dwelling, 40 by 54 feet, ten rooms; first story stone, second story shingles; slate roof, plate and art glass, hardwood finish, furnace heat; cost $7,000. For Dr. W. O. Langdon, two-story frame dwelling, nine rooms, size 34 by 56 feet; stone foundation, slate roof, hardwood finish, furnace heat; cost $6,000. For P. Dowling, two-story building; pressed brick and stone; 20 by 60 feet; cost $3,500. For Frank Kramer, two-story brick dwelling, 30 by 48 feet, seven rooms; cost $3,000. For Louis Zelly, Lake Fork, Illinois, two-story frame dwelling; cost $3,000.

Saginaw, Mich.—The board of public works will erect a city hall, size 212 by 112 feet, brick and stone; cost $125,000.

Salt Lake City, Utah.—As in most other places in this section, it is very quiet here just now, though there is a deal of small building going on, which is hailed with delight by those who have been breaking themselves trying to pay rent.

Architects Dallas & Hedges: For J. M. Brooks, five-story brick and stone store and office building; cost $50,000.

Architects Carroll & Kern: For D. R. Driggs, block of tenement houses, brick and stone, all modern conveniences; cost $75,000.

Architect R. Kletting: For J. W. Taylor, residence, three stories, stone, all modern conveniences; cost $30,000. For Spencer Clawson, two and one-half-story residence, brick and stone, all modern improvements; cost $30,000. For N. W. Clayton, two-story residence, pressed brick and red stone trimmings, complete; cost $12,000.

Mr. A. B. Perkins, representing a syndicate of Denver capitalists, is improving the southeastern portion of the city by erecting a great number of residences. It is an addition laid out on the most approved plan, with broad streets and stone flag pavements, the houses being very complete and lighted with incandescent lighting. The erection of a few more such additions would relieve somewhat the pressure on the hotels and supply "a long-felt want."

The wrangle going on for some time past, regarding the proposed joint city and county building, has been definitely settled by the appointment of Architect R. Kletting to revise the plans made under the old administration and condemned by experts, and to superintend the erection of the building, which will cost about $300,000; work on this building will be commenced at once.

St. Paul, Minn.—Architect Wallingford: For Mr. Andrew Doyle, a three-story store and apartment building; cost $15,000.

San Francisco, Cal.—Architect J. Cather Newson: For Messrs. Madison & Burke, a two-story office building, stone front; cost $16,000.

St. Louis, Mo.—Miss M. Maher will erect a two-story brick flat building to cost $10,000; contractors, J. Flannery & Bros.

Architects Eames & Young: For Cupples Real Estate Company, a seven-story office building, size 25 by 40 feet, pressed brick and terra-cotta; cost $30,000.

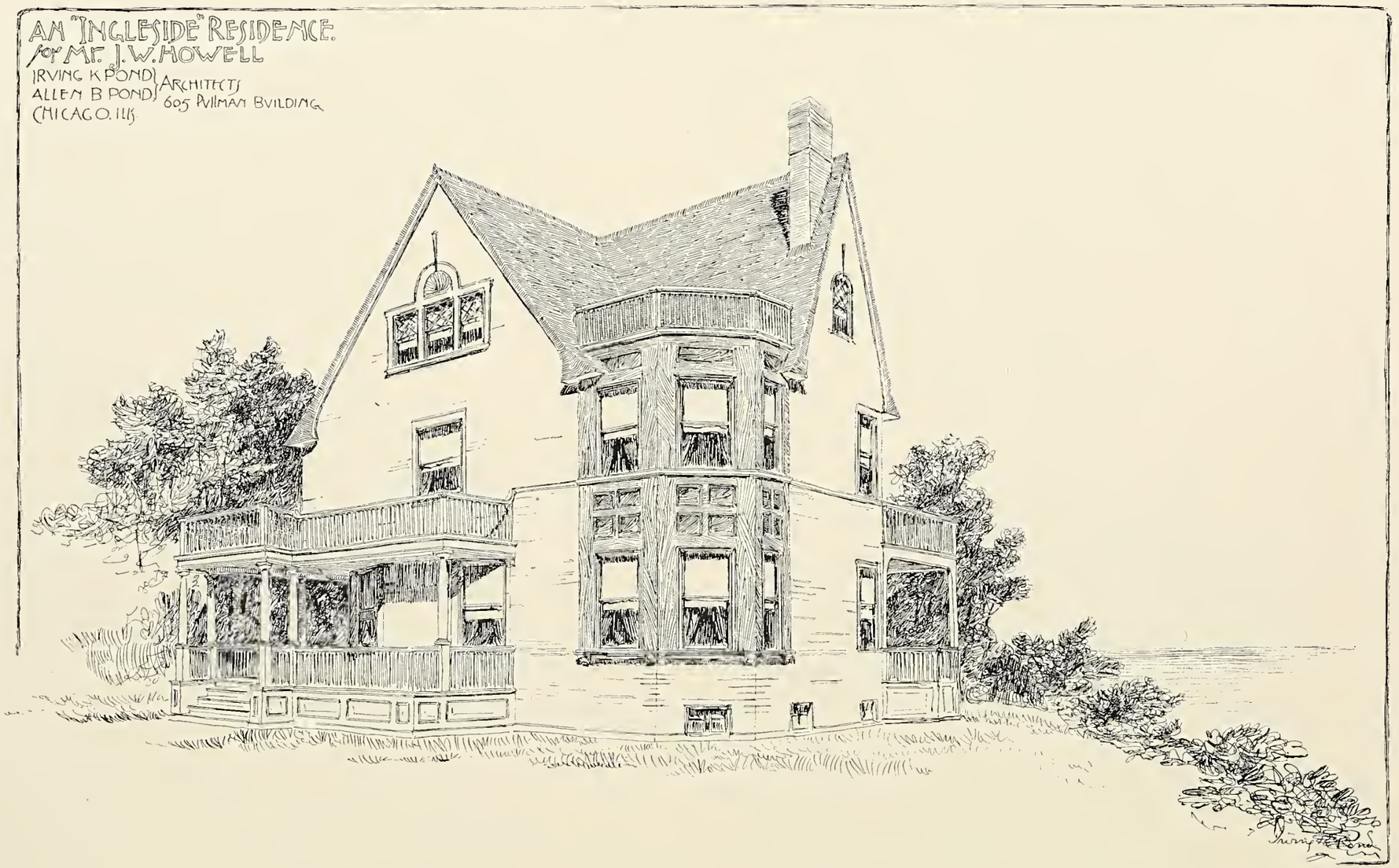
Dr. H. T. Tuholske will erect a two-story brick private surgical institute; cost $10,000.

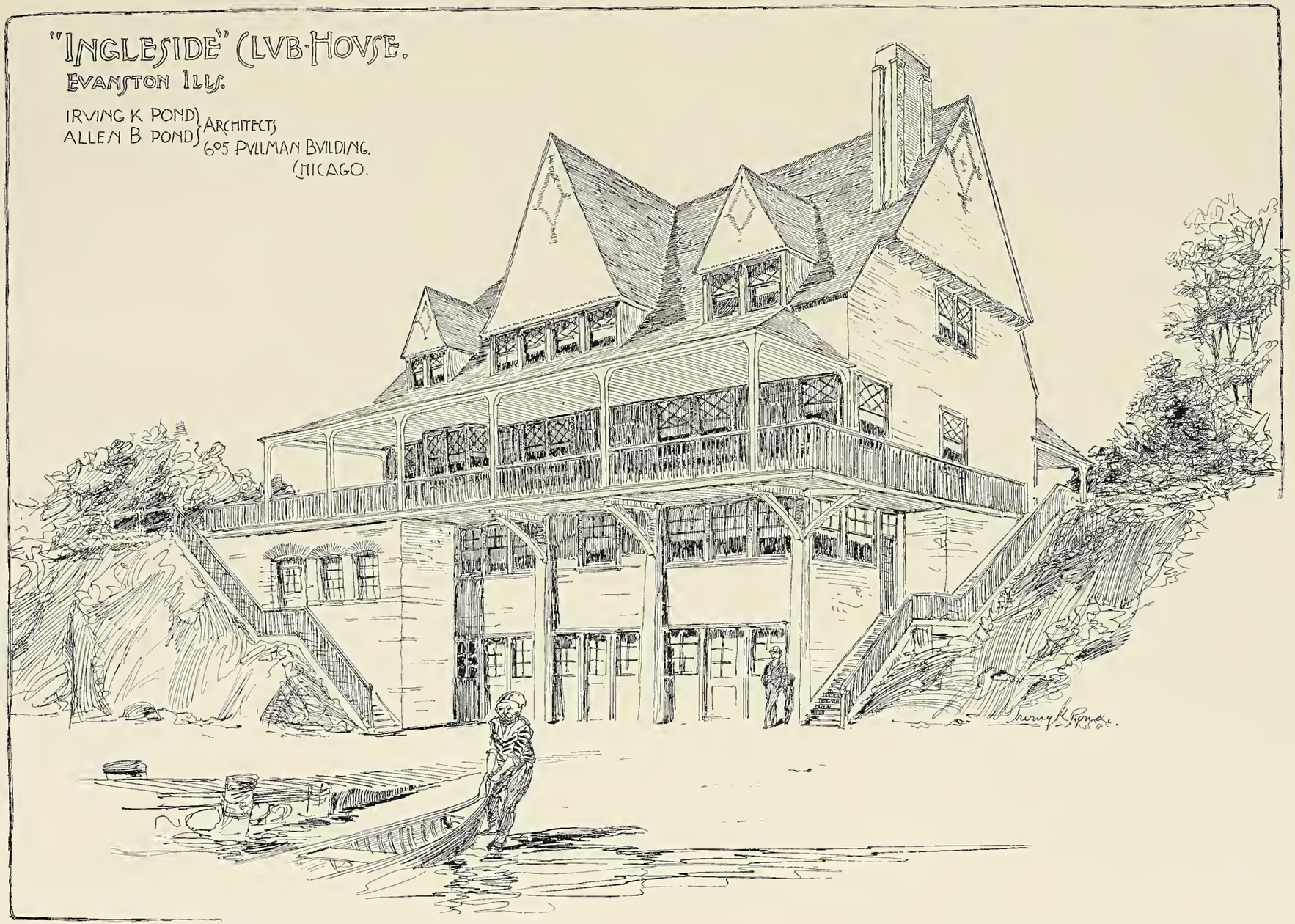
Messrs. Frank Brothers will make a $10,000 addition to their store; Thomas Lowery, contractor.

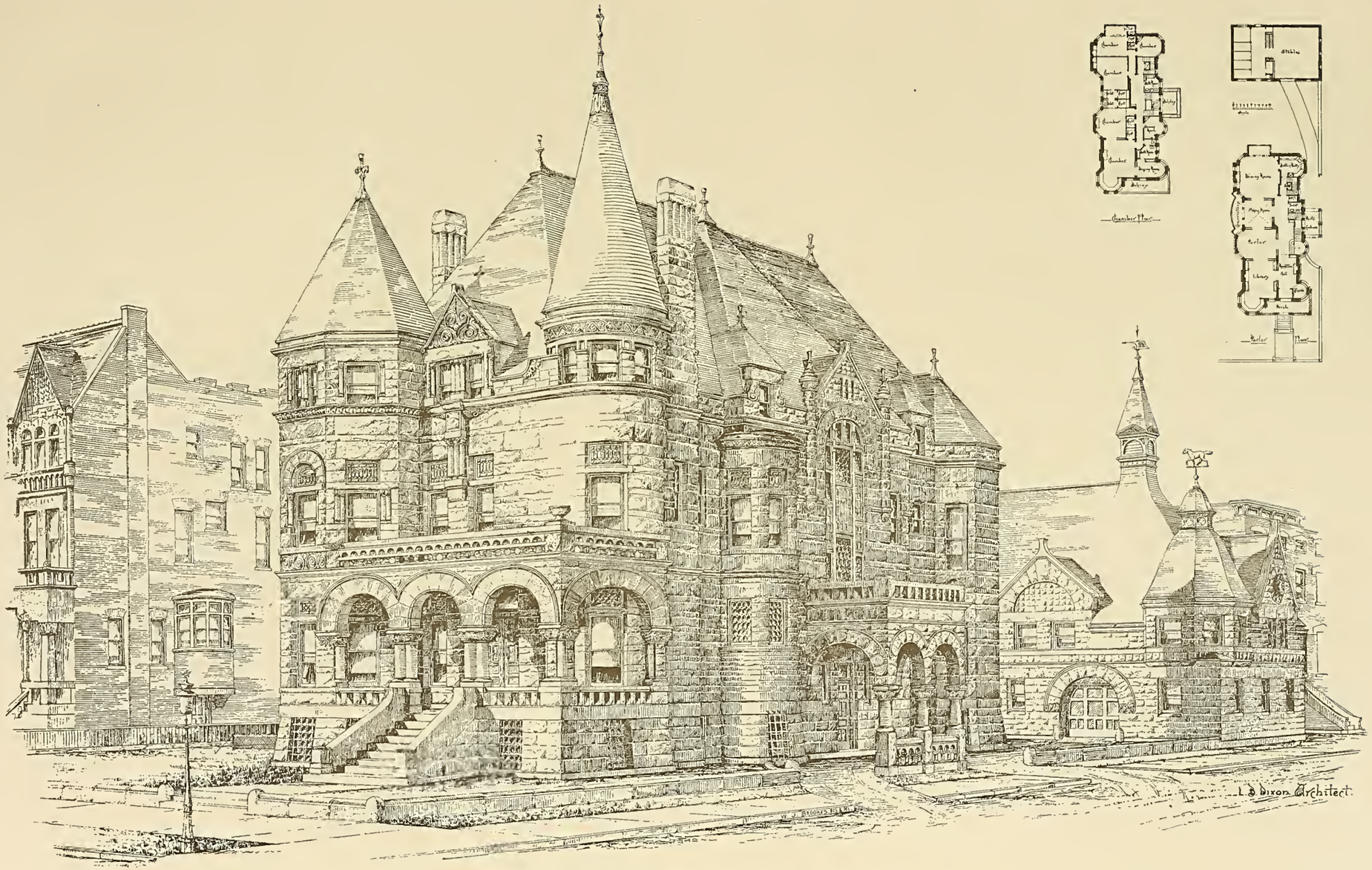
The following buildings will go up this spring: For Mrs. M. C. Clemens, a two-story brick flat building; cost $6,600. For A. Meglitsch, a two-story store and flats; cost $6,000. For M. Ritche, a two-story dwelling; cost $6,500.

RESIDENCE FOR MRS. BABCOCK, KENILWORTH, ILL.

GEO. W. MAHER, ARCHITECT, CHICAGO.


AN "INGLESIDE" RESIDENCE.
for Mr. J. W. HOWELL
IRVING K POND
ALLEN B POND
ARCHITECTS
605 Pullman Building
CHICAGO. ILLS.


"INGLESIDE" CLUB-HOUSE.
EVANSTON ILLS.
IRVING K POND
ALLEN B POND
ARCHITECTS
605 PULLMAN BUILDING.
CHICAGO.

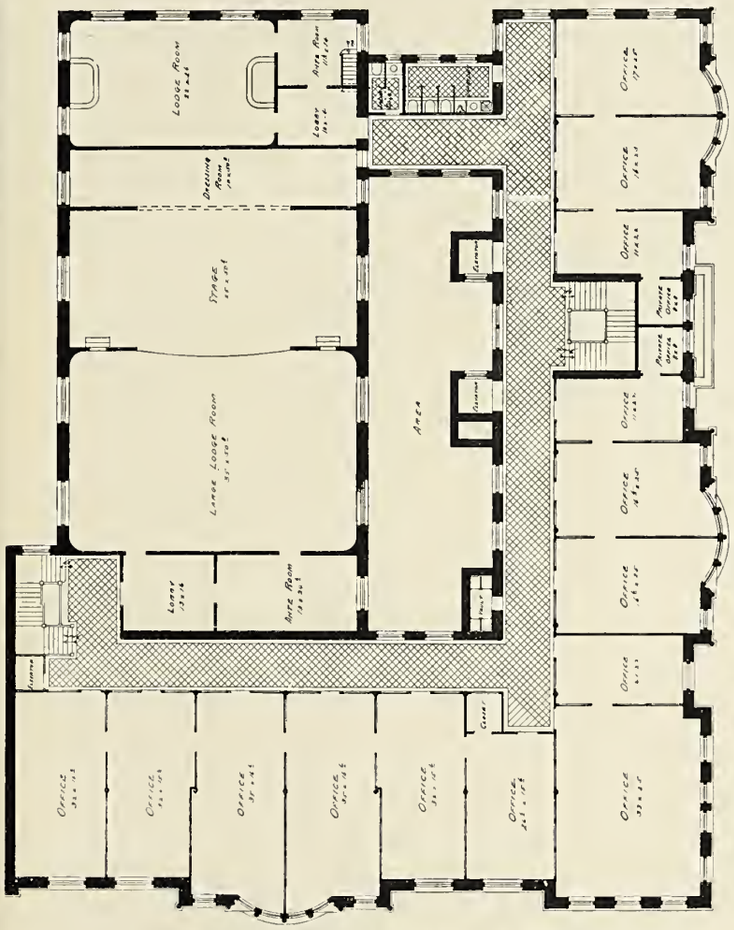


RESIDENCE FOR MR. E. MANDEL, CHICAGO.

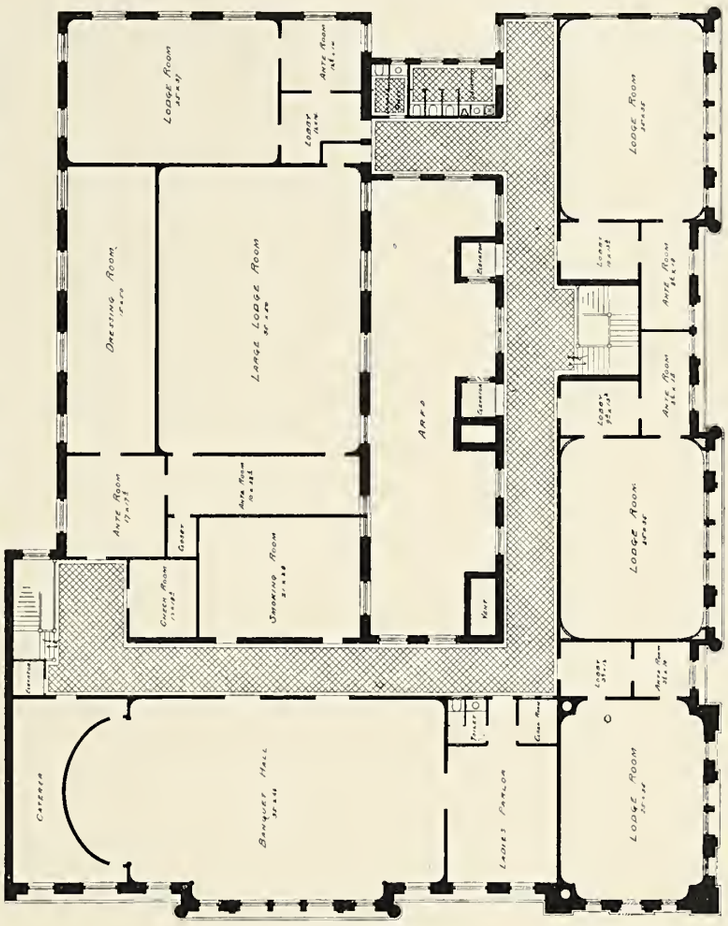
L. B. Dixon, Architect.

ACCEPTED DESIGN, ODD FELLOWS TEMPLE COMPETITION, CINCINNATI, O.

S. HANNAFORD & SONS, ARCHITECTS.



ALTERNATIVE ARRANGEMENT OF LODGE ROOMS.



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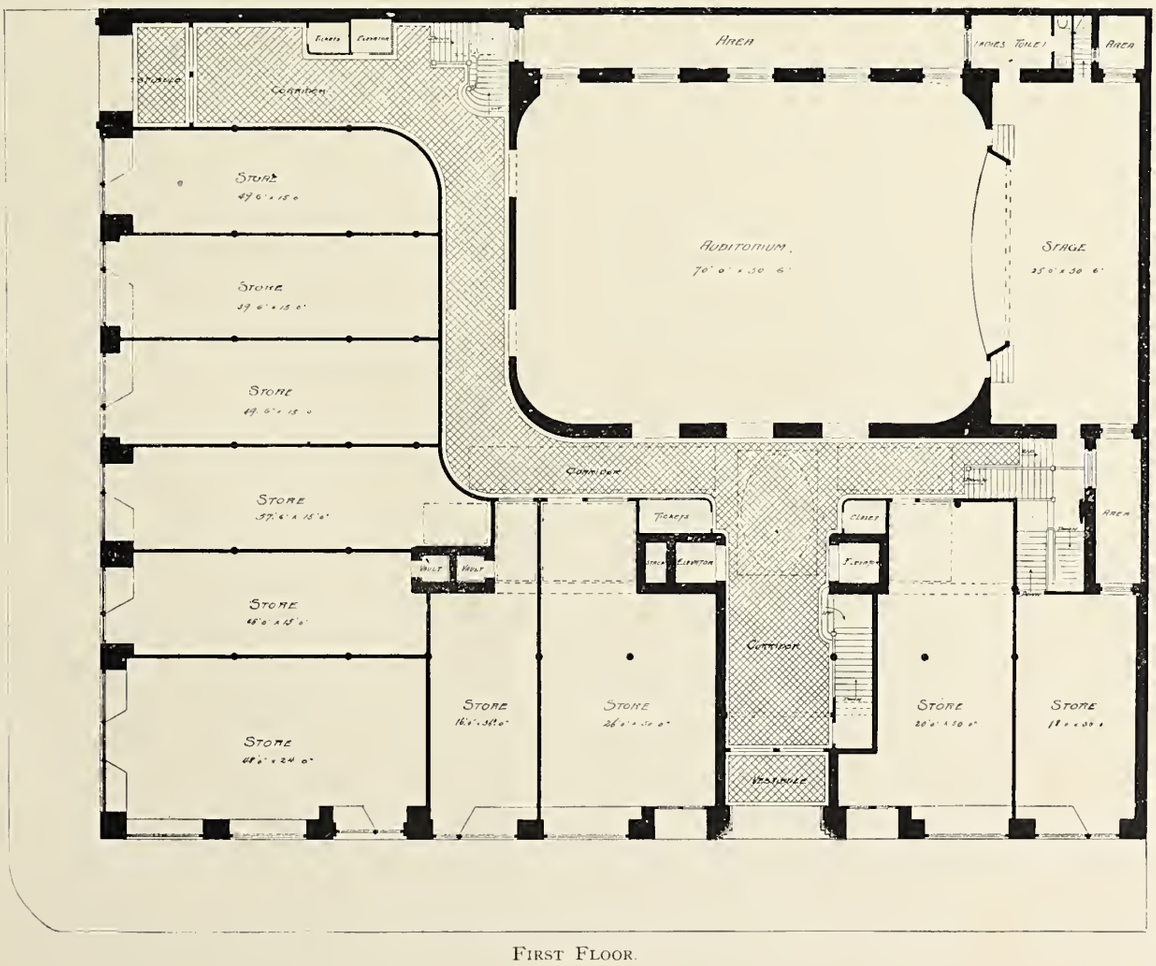

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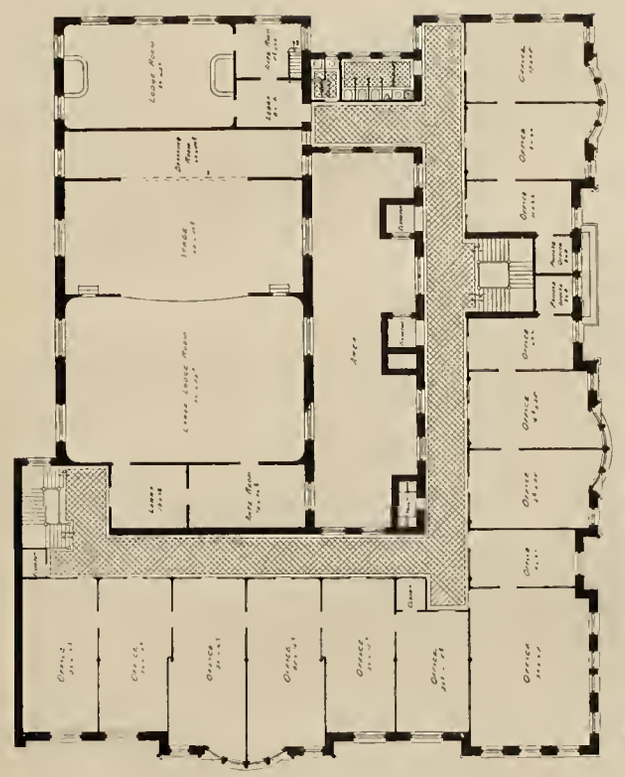
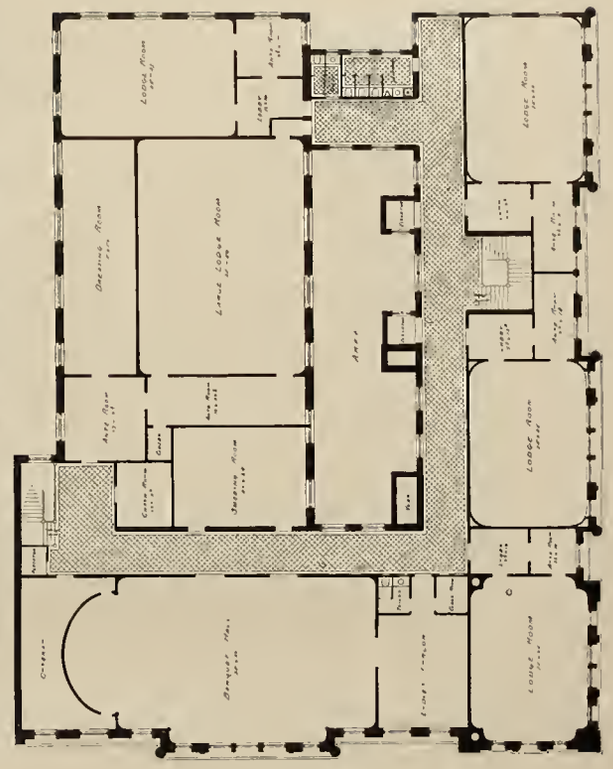
ACCEPTED DESIGN, ODD FELLOWS TEMPLE COMPETITION, CINCINNATI, O.

S. HANNAFORD & SONS, ARCHITECTS.



ALTERNATIVE ARRANGEMENT OF LODGE ROOMS



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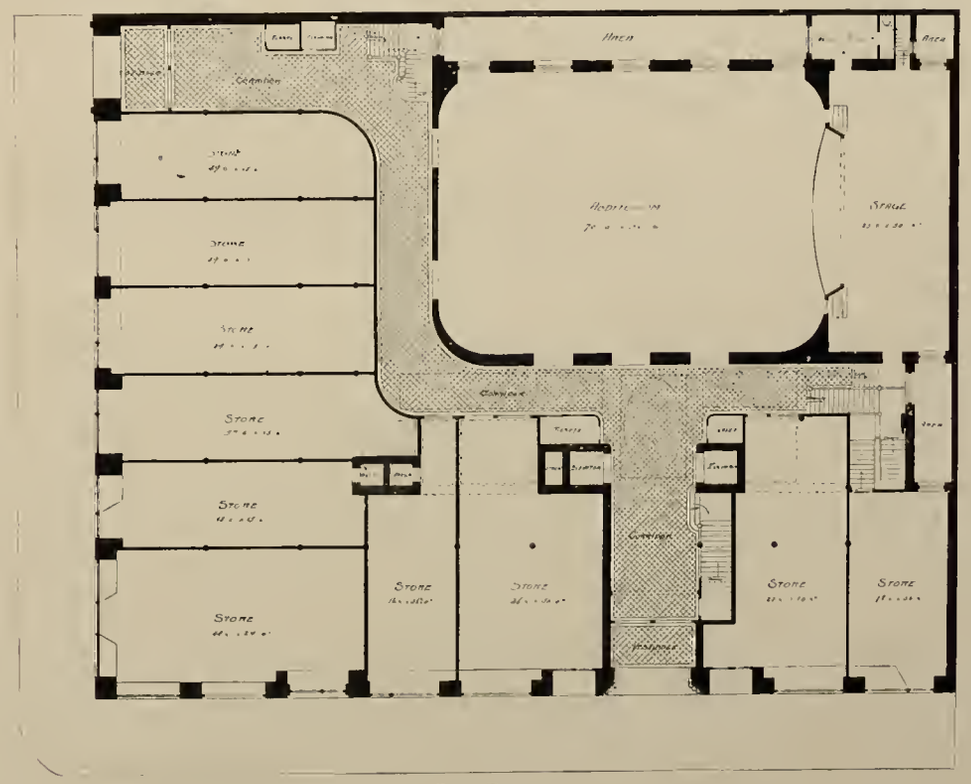

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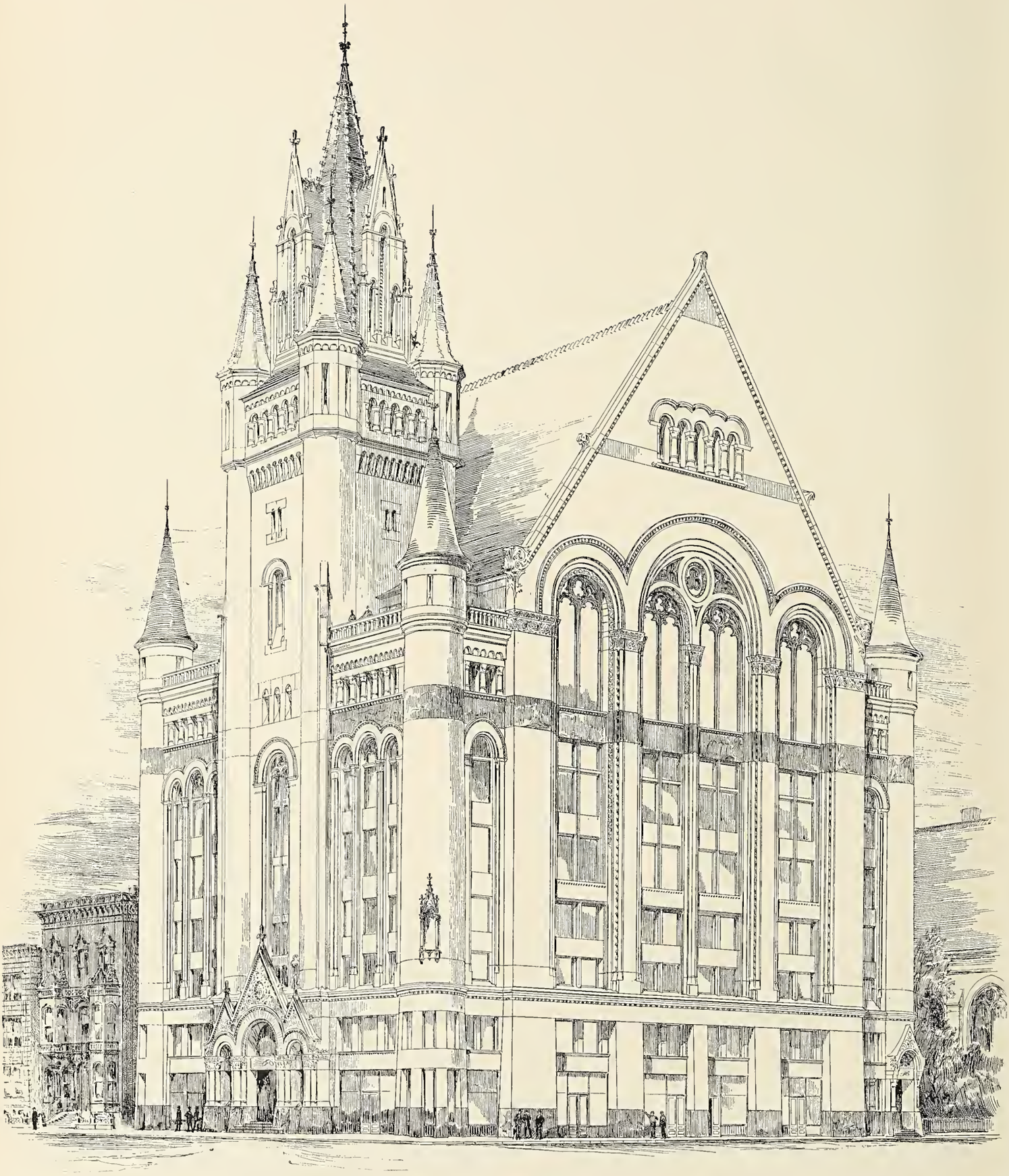
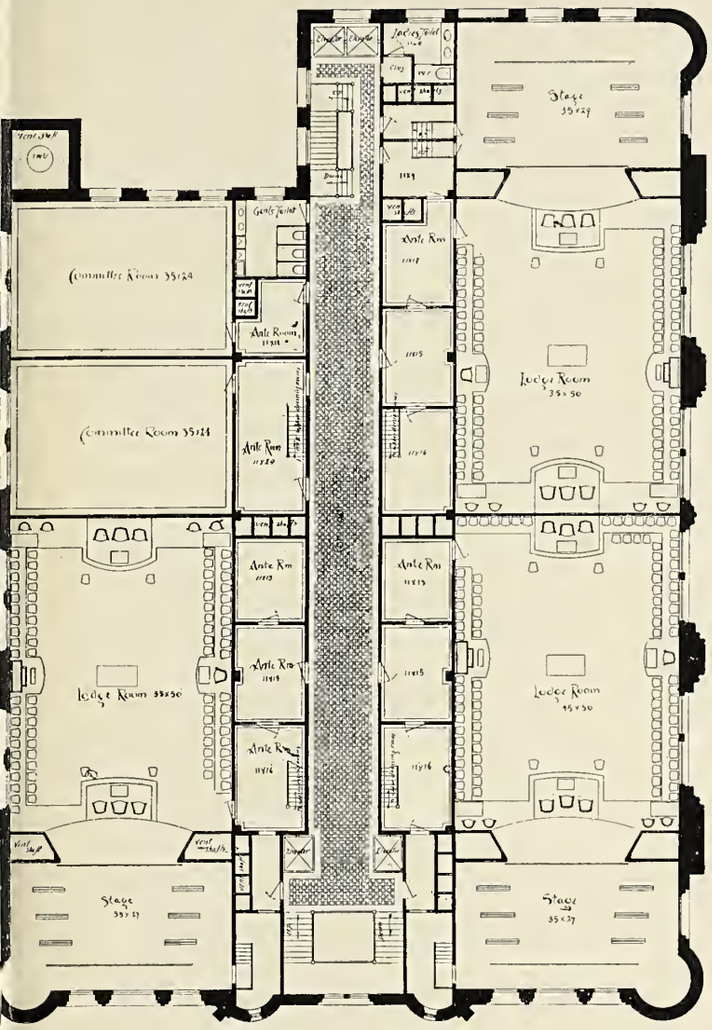


ODD FELLOWS TEMPLE COMPETITION, CINCINNATI, O.

DESIGN SUBMITTED BY A. O. ELZNER, ARCHITECT.



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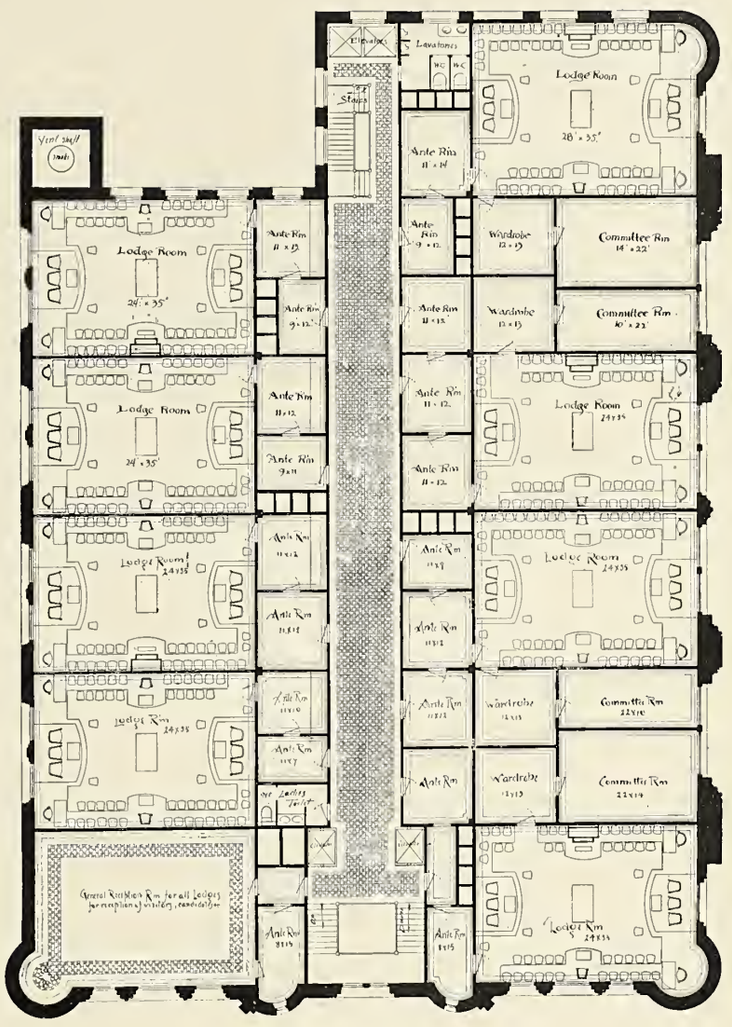

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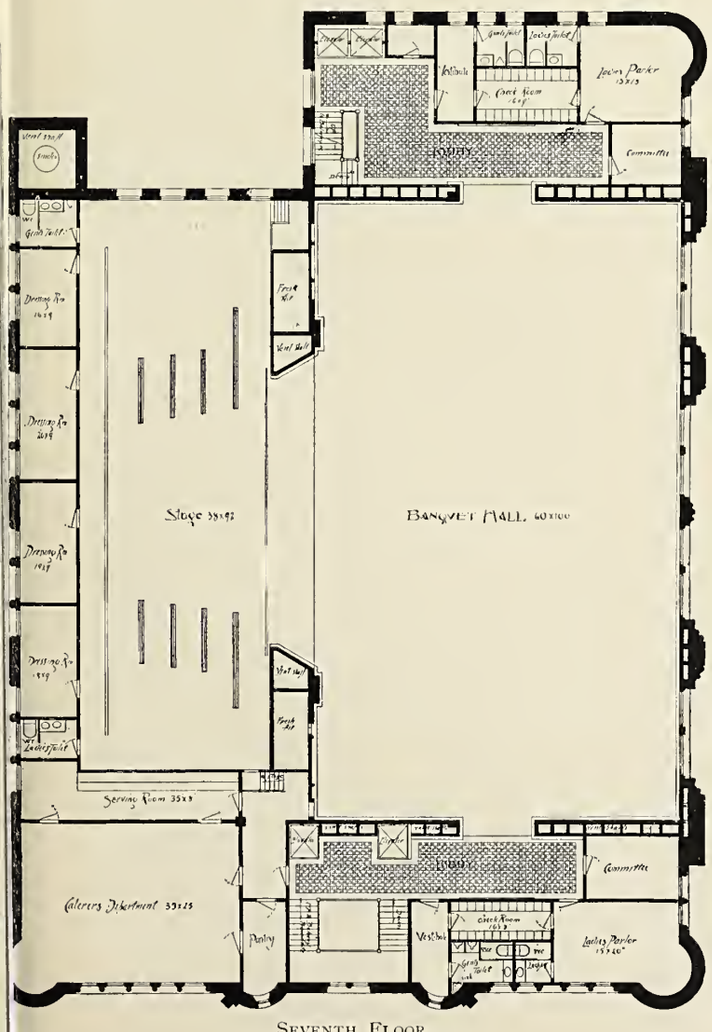

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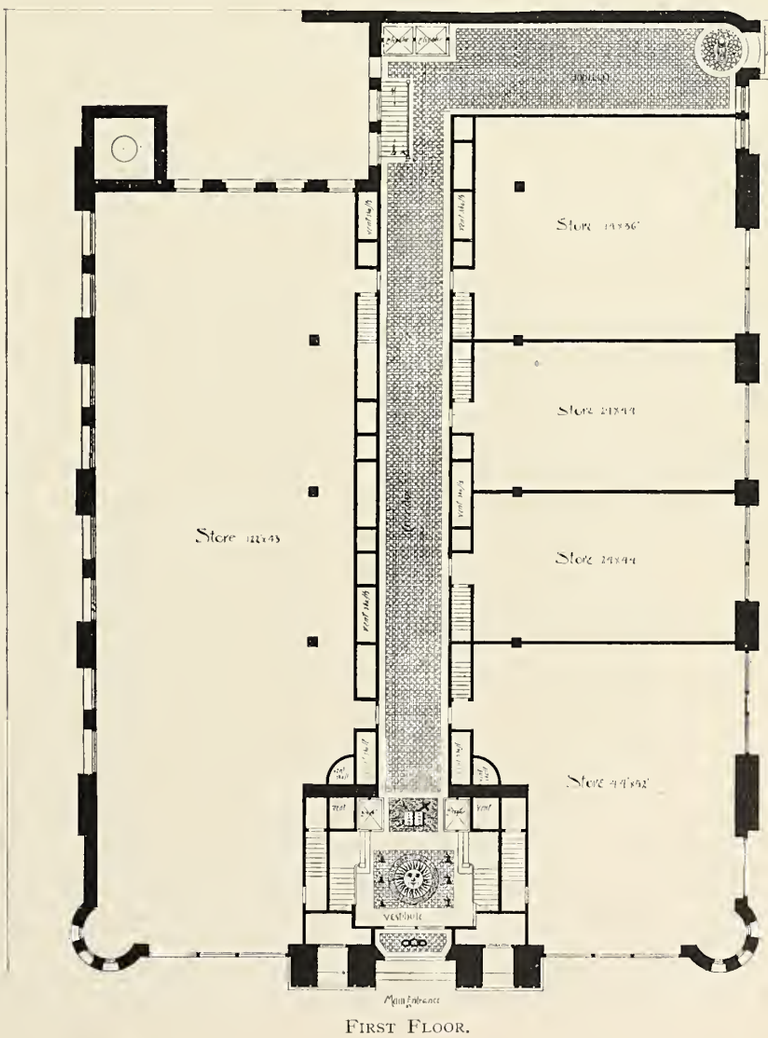

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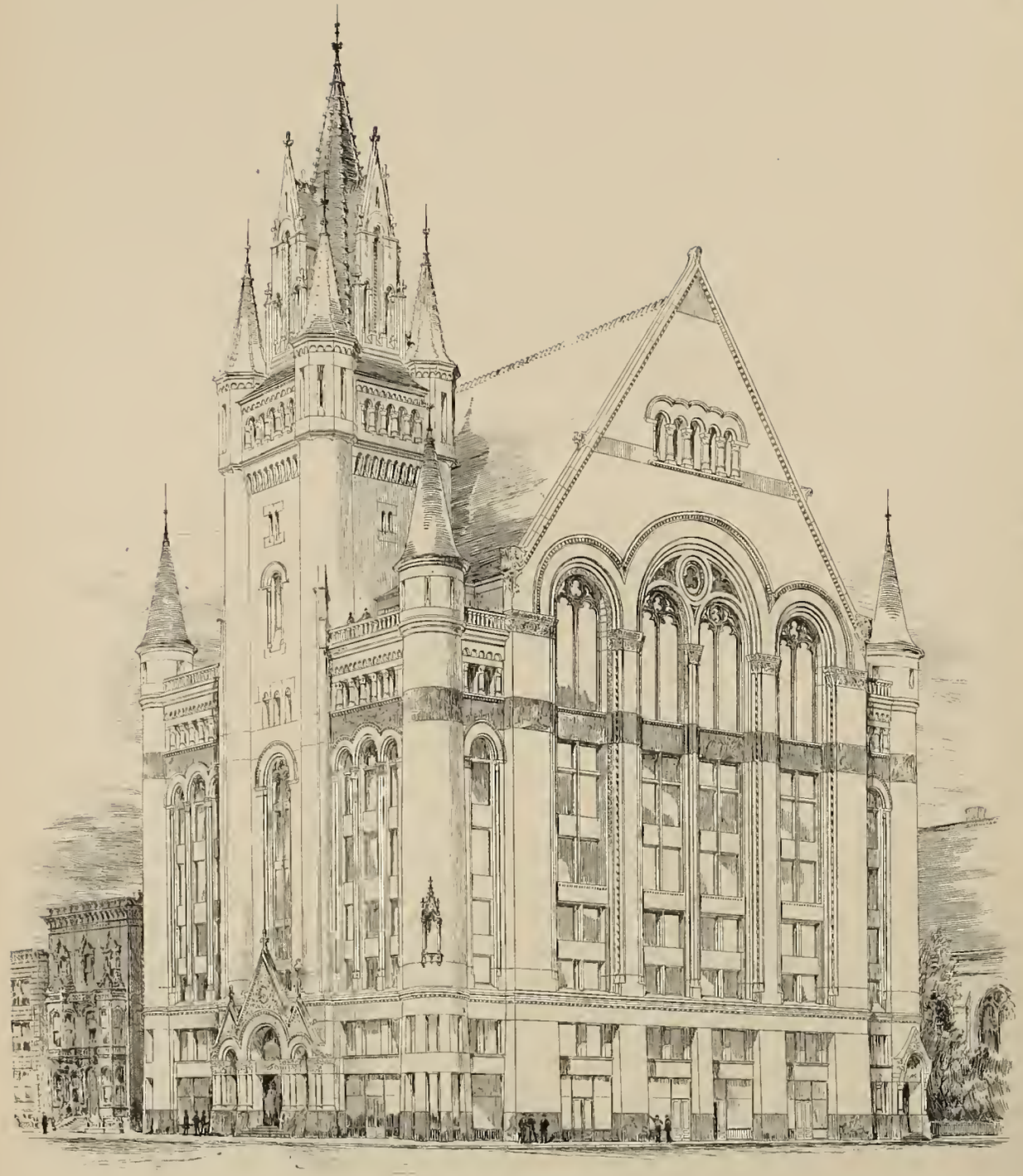
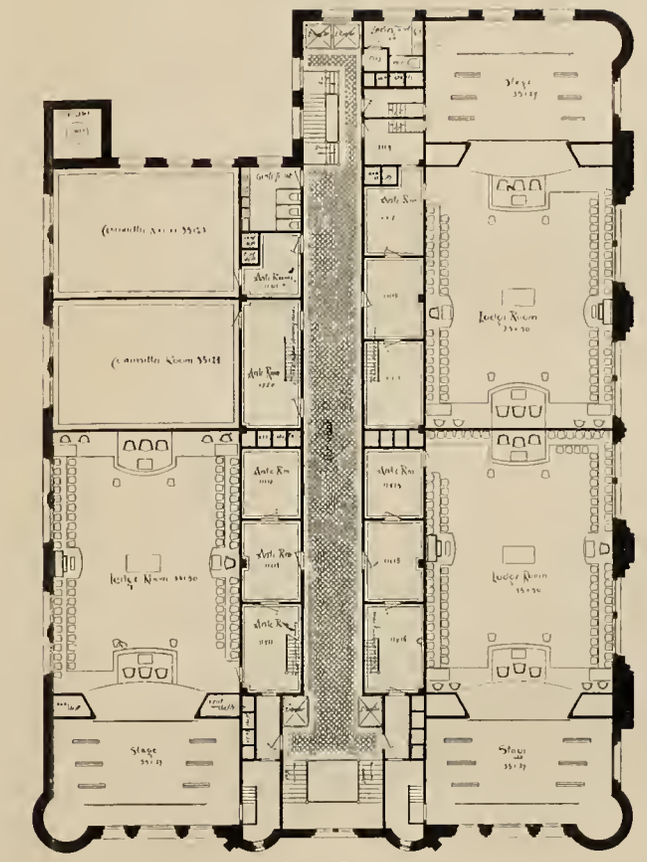


ODD FELLOWS TEMPLE COMPETITION, CINCINNATI, O.

DESIGN SUBMITTED BY A. O. ELZNER, ARCHITECT



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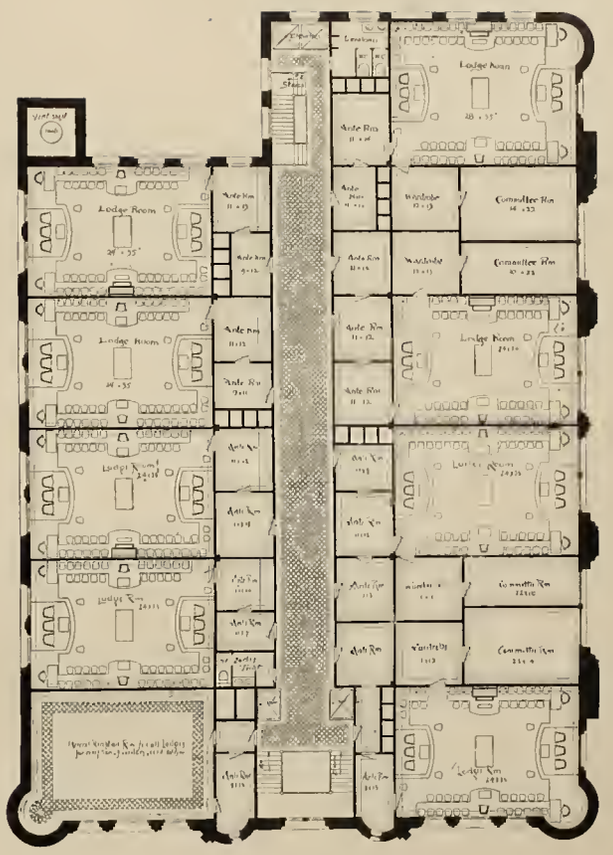

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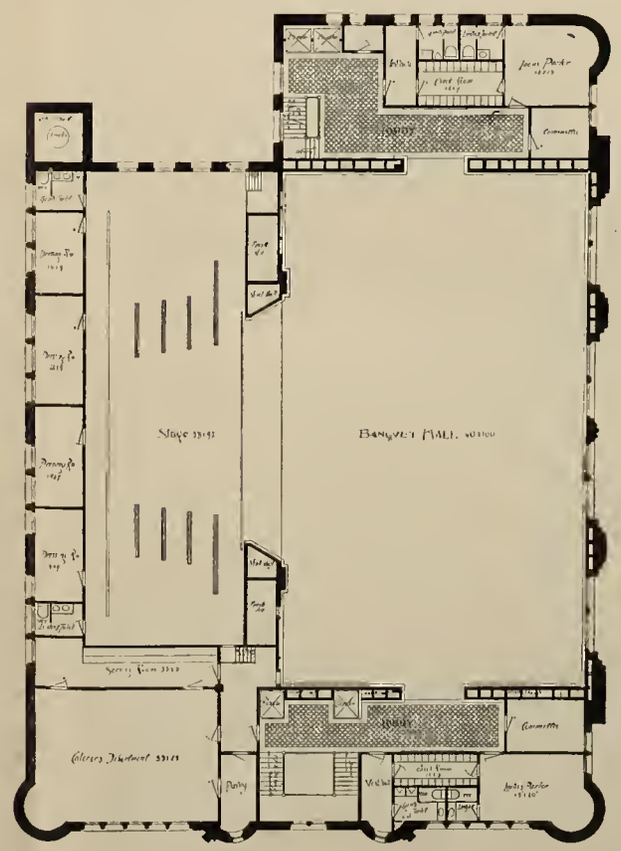

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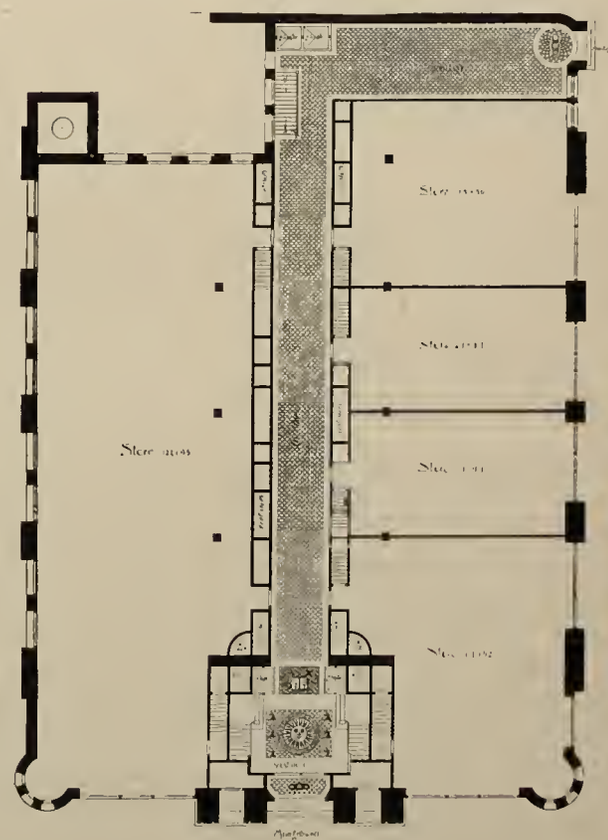

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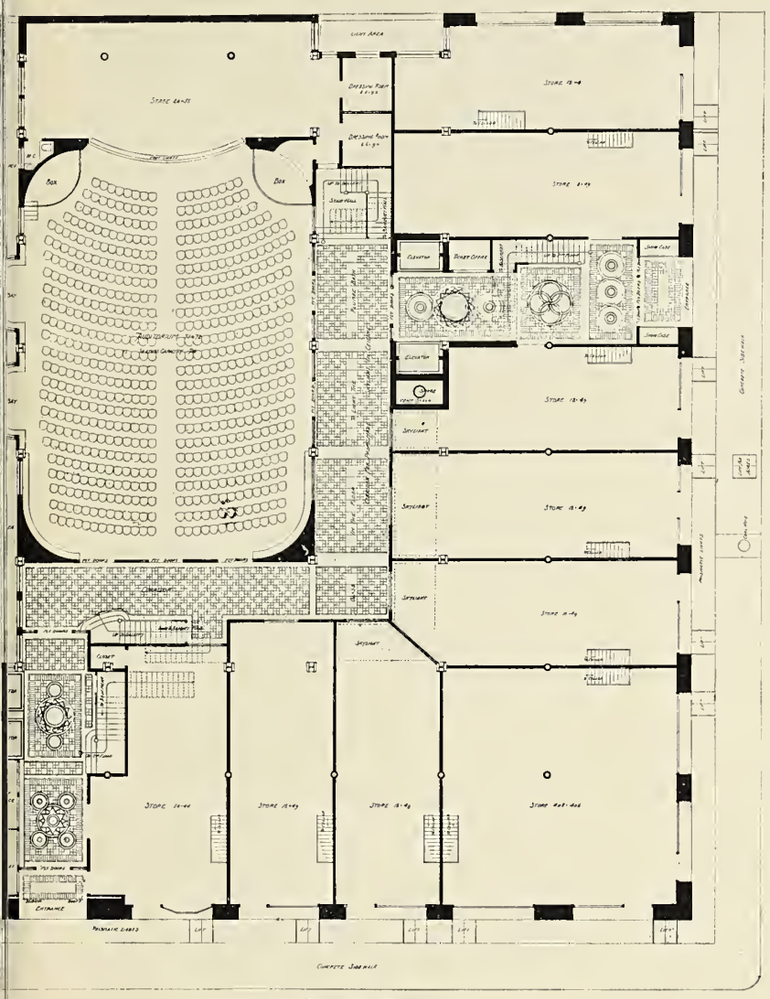
ODD FELLOWS TEMPLE COMPETITION, CINCINNATI, O.

DESIGN SUBMITTED BY CRAPSEY & BROWN, ARCHITECTS.



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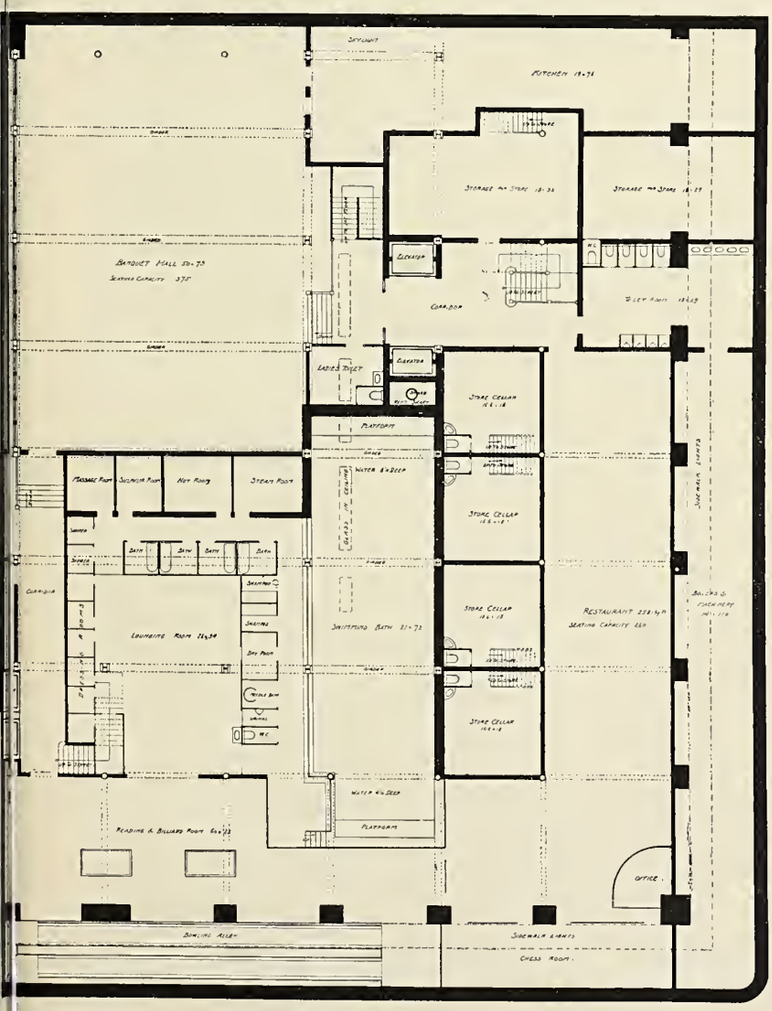

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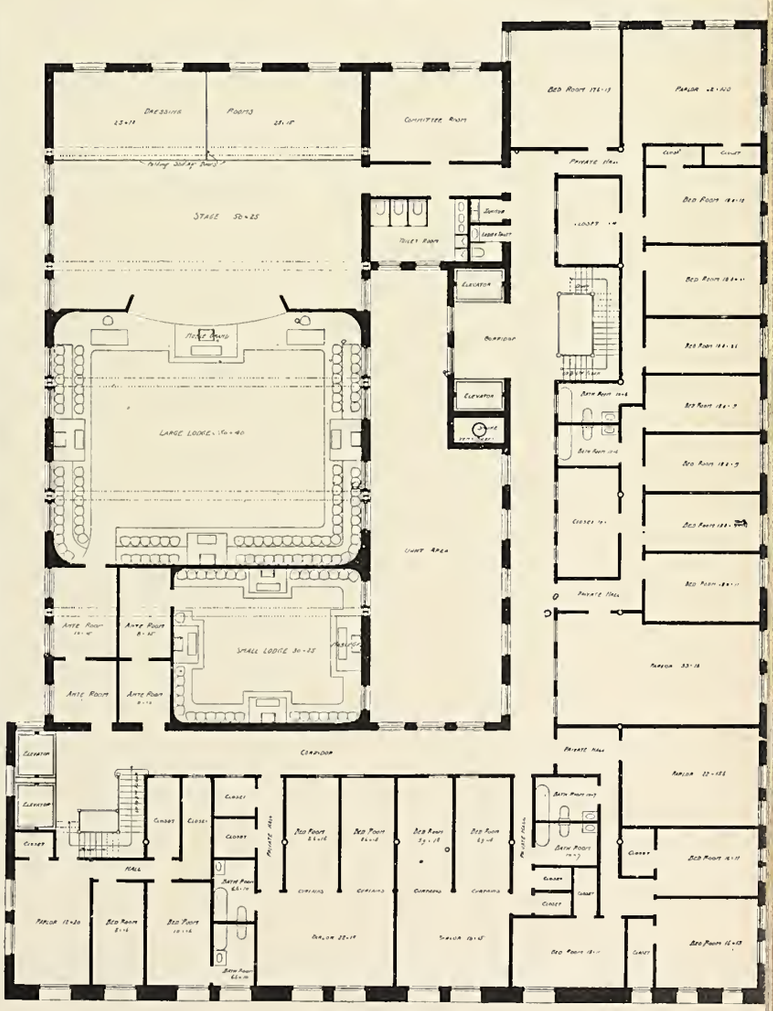

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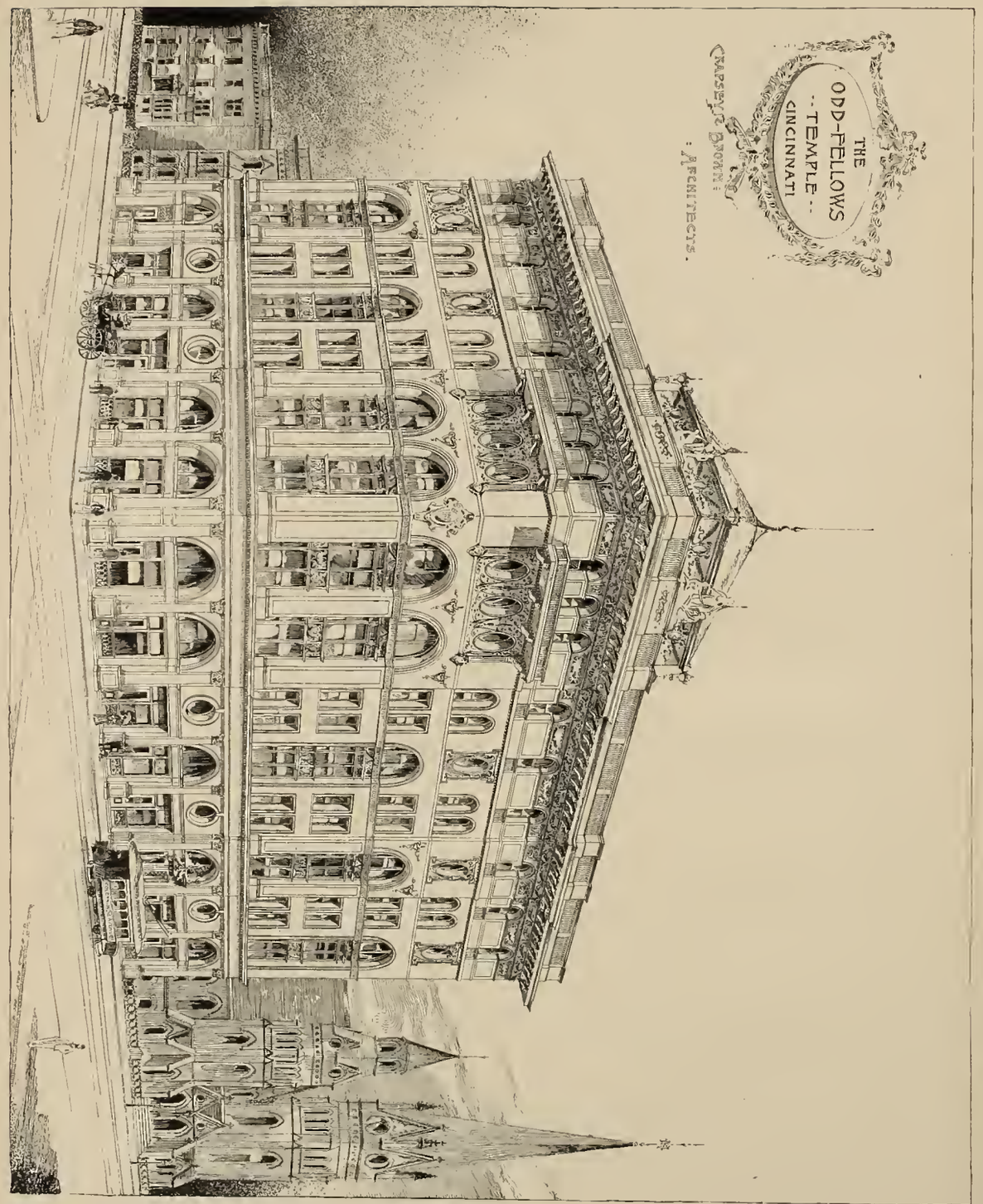
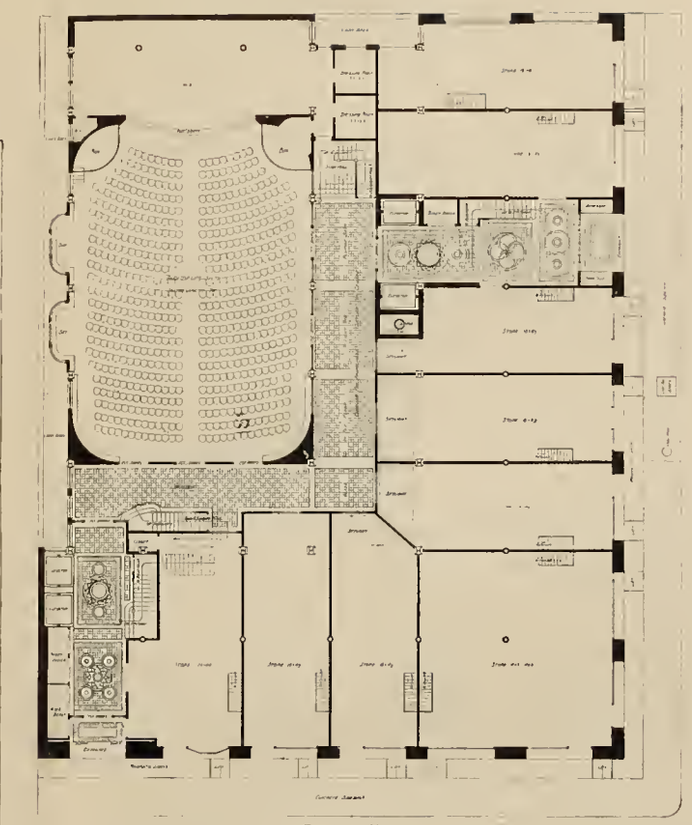
ODD FELLOWS TEMPLE COMPETITION, CINCINNATI, O.

DESIGN SUBMITTED BY CRAINSEY & BROWN, ARCHITECTS.





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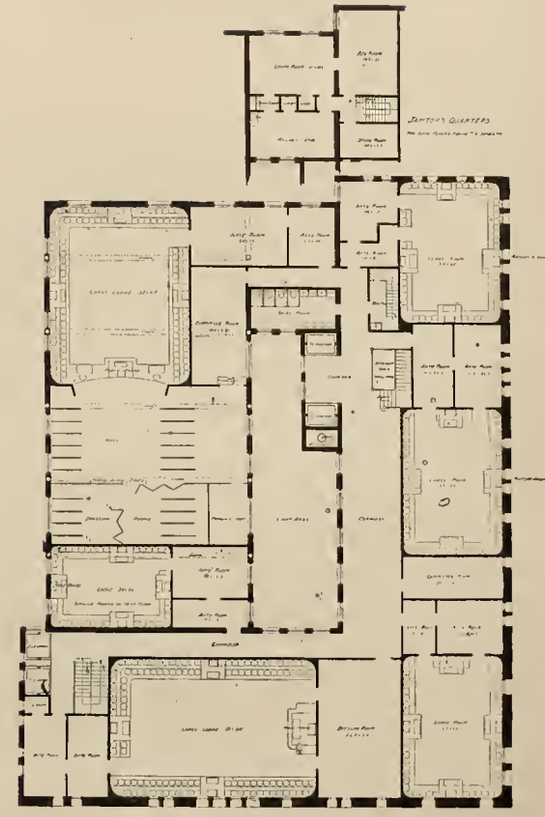

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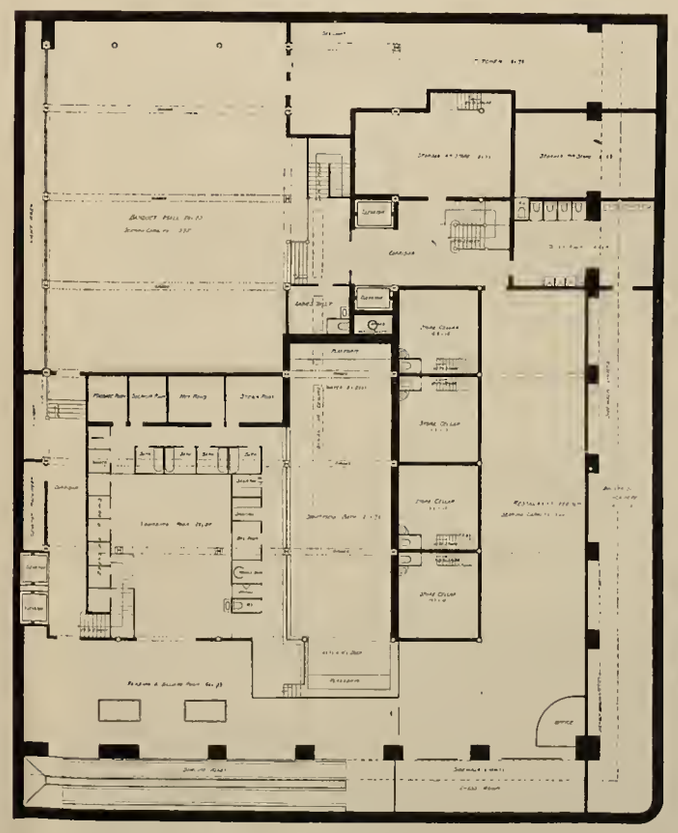

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THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVII. MARCH, 1891. No. 2

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Index to The Inland Architect.

The index to Volumes XV and XVI, February, 1890, to January, 1891, of THE INLAND ARCHITECT will accompany the April number.

A Building for the Chicago Public Library.

There is a strong prospect that a new building will be erected in the near future for the Chicago Public Library. The legislature of Illinois has passed a bill authorizing the city of Chicago to levy a tax of two mills on the dollar for a period of five years, being an increase in the revenue of the library of not less than $1,600,000. It is expected that the bill will receive the immediate approval of the governor, and that supplementary legislation will perfect the title of the library board in the half block called Dearborn Park, a space with an area of 385 feet by 162½ feet. In the matter of surroundings there may be some esthetic objection to the proposed site, but it is probably ample in size, is conveniently located for the cars from the several divisions of the city, and the surroundings will certainly be improved in a decade. It is not likely that the building will be completed by the time that the Columbian Exhibition takes place, but the work undertaken will be in evidence to show that the future Chicago will offer to its citizens something more than the bare opportunity of making money. That the first stage of city building is giving place to a second and higher stage is already evidenced by the start made in the collections and building of the Newberry library, by the sure progress in the direction of art collections, and by the frequent rendition of music of a high order, accessible to the people at large.

Forming a Model Building Ordinance.

At the last annual convention of the National Association of Fire Engineers their executive committee was instructed to ask the coöperation of the National Association of Builders, the American Institute of Architects, the National Association of Building Inspectors, the National Board of Underwriters and the Mutual Underwriters' Association in framing a model building ordinance; and in pursuance of this purpose, committees representing the respective organizations are to convene on April 2 in the rooms of the National Board of Underwriters, in New York. To facilitate the work of the combined committee, the committee of the fire engineers has issued in pamphlet form a draft of such an ordinance. This preliminary draft embodies practically the best provisions now in use in the great cities, with such modifications as will, it is hoped, lead to still better results. The most conspicuous departure from the ordinary regulations is the making of the fire limits, so-called, co-terminous with the municipal boundaries. The area and height of frame buildings are so limited, and they are subjected to such other restrictions, that it is expected that the waste of frontage necessitated by use of such structures will practically do away with their use altogether in the business portions of cities. It is presumed that the elasticity permitted by the latitude of choice will adapt these ordinances to the use of smaller cities and towns as well as of large cities, and will afford adequate protection for

both life and property. In most places such a model ordinance unmodified would be far better than any regulations which the local authorities would be likely to frame, and where special local conditions exist that require special treatment, the changes need not be numerous. Discussion of details of the preliminary draft is unnecessary. Severe as it may seem to people who live in communities where no severe lesson has demonstrated the need, to us it seems, if anything, not rigorous enough. Our belief is that it would be wise to require slow-burning construction in all buildings four or more stories in height. The seventy-five feet limit suggested permits the great majority of hotels, apartments and tenements to be mere firetraps. The proposed limit to the height of buildings to two and one-half times the width of adjacent streets does not seem unreasonable. We commend the project of the fire engineers, and await with interest the action of the combined committee.

Commissions of Spanish Architects.

The Schedule of Charges recognized by the Royal Academy of Architects at Madrid, Spain, presents various novel features. The subdivision of buildings into thirteen classes, according to cost, and the adoption of a sliding scale from five per cent on the first class down to two per cent on the thirteenth is a peculiarity for which it is not easy to account on rational grounds. With American and British architects five per cent is considered a minimum commission, and only on buildings costing from $10,000 upward. The Spanish architects seem to consider five per cent a maximum on the cheapest class of structures, costing not over $5,000. On a fifteen thousand dollar job they are content with four per cent, and on a seventy-five thousand dollar affair they receive only two per cent, all for full architectural service. At the first glance it would appear that architects in Spain are satisfied with very slender emoluments, although a due allowance for the cheapness of living in that country would perhaps show that the commissions named are equivalent to nearly twice as much in America. The division of services is quite different from our own, the charge for drawings and estimate of cost being uniformly one-half that for full architectural services, whence the charge for superintendence, etc., appears to be two and one-half per cent. With us it is one and one-half per cent. There is no mention in the schedule of full-size details, nor of specifications. Drawings only, without estimates of cost and without superintendence, are rated at two-fifths the charge for full service, while the charge for estimates as well as that for duplicate drawings is uniformly one-tenth the charge for full service. On the other hand, the fee for preliminary sketches is only ten per cent less than for drawings and estimate — varying, therefore from two and one-fourth per cent to about one per cent. This is an undoubted improvement on our schedule charge of one per cent for such work. The fact is patent to every architect that his distinctively architectural and personal work is very nearly completed when he has finished his preliminary sketches — his ingenuity in planning, in collocating the various departments, in allotting to each its suitable position and space, the grouping and massing of the parts and the whole in the interiors and exteriors — his design is substantially thought out when he presents his sketch, far more so than one might presume from the ratio between the one per cent he asks for it to the five per cent he charges for full service. Possibly one reason why this inadequate charge for sketches is suffered to remain is the fact that architects never expect to collect in this way at all; they expect the work to proceed, and to include their charge for sketches within that for full service. The Spanish schedule appears to assume that the architectural service for a building will always be in direct ratio with its cost. Our own schedule is equally faulty in this regard. The labor and care imposed on the architect who designs and superintends a fifty thousand dollar theater is out of all proportion with that required for a fifty thousand dollar warehouse, but the schedules put both in the same class, oblivious alike of reason and experience.

Progress in Work on World's Fair.

Rapid progress is being made in getting the site for the Columbian Exhibition graded and in readiness for the erection of buildings. Mr. St. Gaudens proposed at a recent meeting of the committee, that an inclosed harbor should be formed by the erection of two semicircular piers, and that on a pedestal rising from the water inside this harbor should stand a statue of Columbus. This proposal will probably be adopted. The majority of the buildings will be built of staff and either iron or wood. Staff, so called, is a light, composite, fireproof material, comparatively inexpensive, capable of presenting a general appearance of stone, of being cast in ornamental molds, and of being colored in any desired manner. The cost of the buildings erected in this way will be from thirty to fifty per cent less than their cost in stone or brick. Although the designs for the more important of the exhibition buildings have been approved by the committee, they have not yet been displayed to the public. The chief of construction has prepared for the press a statement relative to the character of the several designs, the full text of which will be found elsewhere in our columns. Thirteen women responded to the invitation to send in competitive designs for the Woman's Building. The names of the designers were not known until after the awards had been made, and the best of the designs were so uniformly good that the decision was difficult. The first place, with prize of $1,000, was awarded to Miss Sophia G. Hayden, of Boston, a graduate of the four years course at the Institute of Technology; the second place, with prize of $500, was awarded to Miss Lois L. Howe, who has also been a student of the Massachusetts Institute of Technology; the third place, with prize of $250, to Miss Laura Hayes, of Chicago. We are informed that no one of the competing designers is the architect of any completed building. The accepted design is in the Italian Renaissance style, simple in outline, and, with the exception of the massing of elaborate decoration at the main entrance, is simple in detail.

Electrical Experiments at Rome.

We are in receipt of a valuable pamphlet by Signor Rodolfo Buti, member of the Italian Society of Engineers and Architects, at Rome, Italy, entitled "Simultaneous Telegraphic and Telephonic Service." This is an essay included in the annual proceedings of the Italian Society, which gives at length an account of the highly ingenious and ultimately successful experiments of John Van Rysselberg, director of the meteorological observatory at Ostend, with a view to using the same wire for both telegraphic and telephonic service at the same time, without the interruption of either service by the other.

Architectural Design.*

BY NORMAND S. PATTON, ARCHITECT.

IT is difficult to treat the subject of architectural design in one lecture, but, fortunately, the fundamental principles are not difficult of comprehension. They are founded on common sense, on reason, on the nature of things. No technical training is required to appreciate them. To apply these principles in the working out of new designs requires years of study and experiment before the designer can hope to attain to any mastery, but the principles that are fundamental to the art are akin to the axioms in mathematics; they cannot be proved and do not need proof, for the statement carries with it the conviction

Architecture is defined by Webster as the "science of building"; but architecture, as we mean to consider it, is more than building. The simple construction of an edifice to keep out the elements cannot be truly called architecture. The element of beauty must enter before we have a fine art. Architecture, according to Fergusson, is "the art of ornamental and ornamented construction." Ruskin says that "Architecture is the art which so disposes and adorns the edifices raised by man for whatsoever uses, that the sight of them contributes to his mental health, power and pleasure."

If architecture is *more* than building, it none the less *includes* building as a fundamental part. No edifice that is bad building can be good architecture. In all the great periods of architecture the buildings were designed so as to be the most suitable and convenient for the purposes required. The ornament was made to express and harmonize with the construction, and beauty was obtained without the sacrifice of utility.

I have often heard the remark that it is unfortunate that there is such an antagonism between beauty and utility in architecture. To which I reply that there is no antagonism, but quite the contrary; because, in architecture the highest beauty cannot exist except as coupled with and expressing utility. One of the most important elements of beauty in architecture is the fitness of each part for its place and purpose. Everything that goes to make up a good building must be included as a part of a good design. A building must shelter from the heat and cold; must be well lighted and ventilated; must have the various apartments arranged to meet the uses of each; good architecture will include all these and add the virtue of an artistic expression.

For convenience I will divide the principles of architectural design into those which apply to form alone and those that refer to the management of special materials.

The first and foremost principle is what Ruskin calls the lamp of Truth. Viollet-Leduc calls it Sincerity. A building, and every part of it, must be what it seems. Fergusson says, "No sham was ever permanently successful, either in morals or in art, and no falsehood ever remained long without being found out; or which, when detected, inevitably did not cease to please." This principle will have fuller treatment when we come to the subject of materials, and I will now call your attention to the reverse of this. An architectural design must be what it seems, but it should also seem to be what it is; a design must express something. That something is the character of the building. We start with the assumption that the plan has been arranged on the basis of pure utility; that every part has been disposed of in the manner to best carry out the requirements of the problem, or the special wishes of the owner. In preparing a sketch plan for a dwelling, the skillful architect arranges the rooms without regard to any preconceived idea of the exterior design. Placing this room to catch the morning sun, adding a bay to another, not from mere caprice, but because it will give a view not to be had otherwise, or catch the sunshine from a new direction. When these and other practical questions are settled, then the architect begins to consider how he can best arrange a design to fit the plan. If he is fortunate enough to have an intelligent client he finds that many novel arrangements have been developed, so that no previous design will fit the case, and therefore his inventive faculty must be exercised to find some new combination of features that will fit the plan and at the same time produce a satisfactory effect. In this way the external design is a natural growth from the ideas which have been incorporated in the plan, and therefore it expresses those ideas. Such designs are pleasing and do not lose but rather gain upon long acquaintance. Of course, there may be found features that cannot be harmonized and something must be changed, but in my experience I have never found it necessary to spoil a good plan in order to make a handsome design.

If an architect makes a church look like a club house he can hardly claim success, unless the church happens to be one where the club idea is predominant and the religion only a sufficient flavor to be an excuse for holding the club meetings on Sunday. Nor will that architect do any better who makes a modern church on the pattern of a medieval cathedral. The plan should fit the needs of a church of the nineteenth century, and the design must follow where the plan leads it.

Photography and the printing press have brought within our reach the architecture of all ages and countries, and the designer is embarassed by the abundance of the suggestions offered him. Perhaps his greatest danger lies in that he is apt to appropriate some admired feature from another building and apply it where it is not in keeping with its surroundings.

Before taking up in detail the principles of design it will be well to return to our definition of architecture as a guide in determining what should be made most emphatic. We can hardly do better than to accept Fergusson's definition, "the art of ornamental and ornamented construction." The term ornament is here nearly synonymous with beauty, and we might say, "Beautiful and Beautified Construction." If we stick close to this idea and all that it implies, we cannot go far astray in our adoption of architectural styles.

It is often surprising how much of a sermon can be extracted from a very short text. Let us try with our text of four words, "ornamental and ornamented construction." Notice in the first place that it is *construction*, therefore the constructive basis must be rational or the design will not be sane. The construction must be *true*, there must be no shams or deceits and it must proceed upon some rational system. It must be expressive of the purpose of the building, but we wish to do more than this. We wish to make the structure a thing of beauty. Our definition indicates two ways of doing this: First, arrange the construction in an ornamental manner; second, add ornament to the result thus obtained. There are buildings which have no merit as designs except for the ornament lavished upon them, but they can never rank as successful works of architecture. In every true design the building should be handsome if stripped of all ornament. When a designer has succeeded in making his sketch effective without the use of ornament, then he is ready to begin his experiments with ornament to heighten the effect already obtained.

One of the most essential elements in giving a pleasing effect to the construction is *strength*. It is, of course, of the highest importance that a building should be strong. Therefore, following our principle that the design should express the qualities of the building, we find as an application of this that a building must *be* strong and *look* strong. The eye must be satisfied that there is ample strength, and in important works there should be an apparent excess and abundance of strength. Any appearance of weakness is fatal to the effect of a design, although there may be actual strength secured by some iron beam or other concealed device. Every weight must have a sufficient support to sustain it and every thrust must have a resistance to meet and balance it. This principle is so obvious that it needs no further comment, but the converse of this principle is none the less true, although often forgotten by architects, namely, every support should be proportioned to the weight to be borne, and where there is *no* weight there should be *no* support. We often see an enormous development of pedestals, columns and cornices sufficient to hold one corner of a building, but they serve only to carry a diminutive statue or ornament. If you build a *strong* foundation you must put a *heavy* weight upon it or the effect will be disappointing. A great weight sustained by a great support always produces a powerful impression upon the spectator. A weak looking foundation under a heavy weight produces an unpleasant effect, likewise a light weight placed upon a heavy foundation, for the latter is a case of "much ado about nothing."

A feature that is essential to all great effects is mass. We can achieve beauty in small objects, but the idea of sublimity cannot be attained except when the size is great. When colossal dimensions are associated with massive forms and executed in enduring materials the effect cannot be otherwise than impressive, however bad the architectural design may be. Thus many buildings rank in the popular mind as fine works of architecture simply because their size impresses the imagination; and other works of real merit because of their insignificant dimensions are passed unnoticed.

When we come to the arrangement of construction in an ornamental manner no one principle is of greater importance than that of *proportion*. All the art critics agree that *proportion* is at the basis of every good design. A vast amount of ingenuity has been expended in endeavors to discover the secret of the ancients in proportioning their buildings. No one will quarrel with the writers on art that a building should be well proportioned, but the practical question comes up in regard to this and many other principles of art, how shall we determine whether the proportions are good or bad in any given case? What shall be our rule?

How is a man to design a building with which the art critic will not find fault? Evidently by laying out his design by the same rule which the art critic will apply in criticizing it. A critic says the design is badly proportioned. The building is too high for its width.

How does the critic know it is too high for its width? Is it because the height does not bear to the width a certain arithmetical ratio? Is it because one equilateral triangle put on top of another will fall short of the cornice? No, the critic applies no such rules as these. He says the building is too high because it looks too high. And he is right. If therefore the designer makes the building so that it will not look too high, the critic will be pleased. One thing, however, must be borne in mind; it is always difficult to judge of a new object because we do not fully appreciate it at first sight. Therefore we must be wary of passing hasty judgment upon new forms of design until we have had time to become familiar with them and understand their meaning. The highest forms of music are not easily comprehended or appreciated except by expert musicians; but with each performance we discover new beauties. In the same manner works of art of so complex a nature as architectural designs improve upon acquaintance if they possess real merit. The shams and deceits often seem to capture the public favor at first, but they do not stand the test of time. It is undeniable that certain divisions of space are unfavorable to good effect. For instance, it is seldom pleasing to divide the height of any space exactly in the center. This is because we would then fail to carry out another principle of design, namely, contrast. All effects are heightened by contrast. A tall building looks taller if next to a low one. Light is contrasted with shade. If two rooms are made of equal size the effect is monotonous. If one is made smaller than the other the larger one gains in apparent size by the contrast. So, in dividing our vertical space, we

*Lecture delivered at the Art Institute, Chicago, and revised by the author for publication in THE INLAND ARCHITECT.

would naturally make the lower half predominate over the upper, or vice versa.

Symmetry is an element of great power and one not to be neglected, especially in monumental buildings. But we all have such a natural fondness for making an exact balance in the parts of a design, that there is danger of our having too much rather than too little symmetry. It is very well to have the front of a public building exactly symmetrical, the entrance being in the center and the two halves just alike, but if we treat a dwelling house in this manner we find that it looks stiff and formal and not at all homelike. A design may be well balanced without being symmetrical. A tower at one corner may balance a gable at another. As we give up symmetry we gain in the element which we call picturesque. A picturesque design should not be a haphazard affair. You will usually find a certain balauce of parts even when there is apparently great irregularity. When all buildings are symmetrical and formal like Greek temples the effect is very wearisome and it is a relief to turn to a style of design iu which a proper balance between the parts is maintained, not by making the two sides duplicates but by a skillful arrangement of dissimilar features.

Time will not permit going into many other principles of the treatment of design, but I must not fail to mention one, without which we can never attain to what is called style. By style I mean that quality in a design that gives it a peculiar character of its own. We speak of a lady's dress being stylish and we speak of another as having no style, although made of expensive materials and in an elaborate manner. Thus a building in any one of the so-called "styles" of architecture may fail to possess that peculiar and invaluable quality which we call style. If a tailor knows how to give style to a garment he is possessed of a valuable secret in his art. If an architect can know how to give style to his building it will be the keynote to all success in design. I do not propose to give away the professional secret on this point but I will state one principle without which I believe it is impossible to give style to any design, namely, unity. Whether the arrangement be symmetrical or irregular and picturesque, whether it be classic or gothic, or some new invention of our own, each building should be a unit in itself. There must be one prevailing idea to which everything in the arrangement and ornamentation conforms. Variety is important but variety should never go so far as to impair the unity of a design. On important works the architect calls in the aid of artists in special lines to design decorations and stained glass, metal work, etc., but all these branches must be under the control of the one who originated the idea of the building in order that the decorations and stained glass may harmonize with the architectural forms and heighten their effect. So, in the selection of decorative forms, if we should make a Corinthian capital in one place, a Gothic capital in another, the effect would be confusing and the building would fail to produce that clean cut, definite sort of an impression which goes to make up style.

Ornament should not be applied to a building in a promiscuous manner. To put on too much ornament is to cheapen it and spoil the whole effect. Ornament should be used to emphasize the important parts of a building. The principle of contrast points to this as giving the best effect. The ornamented portions appear the richer when contrasted with plain surfaces, and plain surfaces give repose and dignity to the building which it would lack if the whole surface were ornamented.

The foregoing principles apply to all materials which may be used in the construction of a building. It now remains to consider what special treatment we should give each material; and here we enter a field where mistakes are abundant. Let us state in the first place that every building material is good in its right place. Stone and brick are excellent building materials, but they would make very poor windows; glass is much preferable for this purpose. Plaster is a material largely used, misused and abused. In our climate it makes a much better wall surface on the interior of a house than stone or brick. Wood is not as durable for external use as stone. It does not resist fire as well as iron, but for doors and interior fittings of our dwellings and for furniture, it is indispensable, for these purposes much more valuable than stone or any of the metals. Therefore the common-sense principle is to use various materials in the parts of the same building. The difficulty comes when we attempt to treat these materials in an ornamental manner. In this case the correct method is so simple and obvious that it is hard to understand why it has been so much neglected and so often abused. The principle of truth or sincerity is the one fundamental idea to be kept in mind when treating special materials. Let stone be stone, brick be brick, let plaster be plaster and wood, wood. It is not necessary that we should make public all the secrets of construction. In a well proportioned human figure the bones do not protrude themselves upon our notice and there seems to be no reason why we should not construct the skeleton of a building of iron or wood and cover it with plaster or other suitable material to give the finished form. When we recognize the plaster as a covering material there is no deception and therefore no fraud. When we see a plastered wall we know that the whole thickness is not made of plaster, but as long as the plaster is good and honest plaster it is not an inartistic material; but when we begin to paint lines on that plaster in imitation of joints and make it appear like solid stone, then the whole thing is a lie and should be treated as we treat other lies.

Galvanized iron is a very useful material, but when made into a cornice, and painted and sanded to look like stone, it is a lie and a fraud of the most vulgar and pretentious description.

Perhaps I can find no better illustration of the right and wrong use of material than in the difference between the usual treatments of galvanized iron and copper in external architecture. The architect who uses galvanized iron expects to paint it, and he usually paints it to imitate stone. The architect who uses copper knows that it is not necessary to paint it, and that it would be a waste of money to paint a material that looks better without paint. But copper if left unpainted turns a dark color and looks very unlike stone, therefore the architect does not attempt to make it like stone and he knows that if he makes it in the form of stone then the absurdity will be apparent to everyone. Therefore he ceases to use copper in places where stone or other material will be more appropriate and instead of constructing a whole cornice of copper in imitation of stone he uses stone, brick or terra cotta for the main members, and then adds a gutter of copper.

Now copper is perfectly adapted for gutters, whereas, stone and terra-cotta are very poor materials. Therefore, when we have a terra-cotta cornice with a copper gutter we have a sensible combination, and each material being used in its proper manner the effect will be artistic. The man who uses one material to imitate another not only perpetrates a fraud which pleases no one, but he is almost certain to overlook the valuable properties of the materials he is using. The man who grains pine molasses-candy color, under the impression that he is imitating oak, forgets the fact that if he varnished the pine it would be handsome in itself, and he also forgets that he could have the genuine oak at about the same price as his imitation. Instead of imitating in one material the forms only appropriate in another we should attempt to bring out in each material those forms for which it is especially adapted. If the exterior of our house is made of coarse stone our moldings must be of bold outline, but if we finish the interior in mahogany it would be absurd to use the same kind of moldings when this wood will lend itself to the most delicate outlines. Let us rather produce on the interior woodwork effects which it will be impossible to secure with the stone. And so with each material there are forms for which it is peculiarly adapted and in which it will have a charm of its own.

(*To be continued.*)

Women and Architecture.*

BY LOUISE BETHUNE.

MESDAMES—Chairman and Ladies of the Educational Committee: You have requested me to speak upon "Women in Architecture." The subject might, from a masculine standpoint, at least, be disposed of with the brevity which characterized the famous chapter upon the "Snakes of Ireland." In fact, in order to have any topic at all, we must talk of women *and* architecture, assuming a connection which it is hardly safe to assert.

When Cain built Eros, architecture began; but its authentic history dates from the two great river courses of ancient civilization, where Menes laid the foundations for Memphis and the architect King Urukh, fell heir to the throne of Nimrod. Its earliest records are Egyptian hieroglyphics and brick inscription tablets built into the foundations of Ur, the home of Abraham. In the thousands of years since then, what influence women have exerted over this most ancient and most lasting of all the arts, it is now impossible to estimate. The power of the woman of antiquity was seldom that of pure intellect, but of intellect combined with wealth, position and ambition. Given this accidental combination, and some palace, tomb or temple is usually its enduring witness.

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Queen Hetasu's obelisk is the highest in all Egypt; of her inscriptions, defaced and often obliterated by her brothers and successors, enough remain to prove that she completed the temple of Amun-ra, begun during the lifetime of her grandmother, the famous Ethiopian Nefruari. This temple is near Thebes and forms the nucleus of the celebrated El Karnak group. A full dozen dynasties earlier, Queen Nitocris built the yet unidentified pyramid "Of the Soul," believed by some to be identical with the third pyramid of Gizeh.

Queen Artemisia built the first mausoleum, and Marc Antony met his death in another erected by his faithless queen. Voyaging up the Nile, you see the well-preserved and unincumbered temple of Athor, the Egyptian Venus, at Denderah. This and one smaller and more picturesque, near Thebes and the famous baths, were also built by Cleopatra. Even Zenobia found time to build a town on the river Euphrates.

From then to now the list might include every historic name, besides all those of the sainted women of Catholic Europe, who built and governed monasteries as well as nunneries, and who founded and endowed charities and schools.

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During the reign of Queen Elizabeth the great architectural activity has given us a delightfully picturesque domestic style, transitional between the latest phase of English Gothic and the earliest of the classic revival.

A still later phase of English architecture is to be seen in the churches of Queen Anne, one of which (St. Dunstan's in the East) is thought to have been the design of the gifted and short-lived Jane Wren. The "real Queen Anne house" of the speculative builder is a serious practical joke about on a par with those perpetrated in the name of the much maligned Sir Charles Eastlake.

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Architecture is seldom satisfactorily defined, perhaps never briefly and well. It is not construction in any of its various branches, nor is it arrangement of interior nor exterior, nor coloring, nor carving, nor profiling of moldings; neither is it acoustics, nor fenestration, nor sanitation, nor any one of a hundred other things. It is

* Portions of a talk before the Women's Educational and Industrial Union, Buffalo, March 6, 1891.

the arranging and adjuncting, harmonizing and contrasting of all these and many other elements into a suitable and satisfactory whole.

When wants were simpler and before construction became a science, when every building was the natural sequence of its predecessors, the architect was often an amateur, frequently of the highest ability. Musicians, poets, painters, sculptors, emperors and kings expended wealth and talent on towers and domes, bridges and aqueducts that have outlived the memory even of their other achievements. To specify the causes of their success, as contrasted with the many pitiable failures of the modern amateur, would lead too far from our subject and necessitate a lengthy treatise on the antiquity of the model as a means of architectural representation or vehicle of design; its great value in the centuries before linear perspective was understood, and its final almost total disuse upon the adoption of the more intricate varieties of mechanical drawing. In fact, the abandonment of the model may be said to mark the line of separation between the amateur and the professional architect. Its use today would spare the blushing novice much confusion, particularly in that shibboleth of all amateurs, the staircase.

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The professions of medicine and law were far advanced before the much needed and highly appreciated woman physician and lawyer appeared. Women have entered the architectural profession at a much earlier stage of its existence even before it has received legislative recognition. They meet no serious opposition from the profession nor the public. Neither are they warmly welcomed. They minister to no special needs of women, and receive no special favors from them.

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The great architectural societies of the country, the American Institute and its state and city Chapters are all open to them upon proof of qualification. Thank, with me, the noble hearted men whose far-seeing polity and kindly nature has laid this stepping-stone.

With few exceptions the educational facilities are the same for men and women. The architectural department of the Columbia College School of Mines is however open to men only, though in the Metropolitan Art Schools women have access to classes, lectures and the Willard collection, considered first in America. Three or four young women have availed themselves of this opportunity, and one, at least, makes practical use of her training. The advantages of a large city with its libraries, museums and opportunities for studying general structural work can hardly be overestimated.

Among foreign schools that most affected by Americans is the École des Beaux Arts in Paris. There is a prospect that this school may be open to women before long, and French papers are now canvassing the subject in a manner that would be quite impossible elsewhere.

In Boston the School of Technology Architectural Course, partially modeled upon the Paris school, offers special advantages to pupils who have received previous office training. Two young ladies have been graduated from four and two years courses respectively, but none are now entered.

Cornell graduated the first university educated young woman in 1880, and since then four have completed the course that four more are now pursuing. Two of the graduates have since died.

Miss Parker, of Philadelphia, has sent me such information and many circulars concerning local art schools, none of which, however, seem to present the requisite facilities for a thorough technical education. The School of Design for Women is noticeable in this connection because it was founded in 1847 by Mrs. Sarah Peter, to whose endeavors the Cincinnati Academy of Fine Arts is also traceable.

One Philadelphia instructor writes that he is willing to receive women, but has never done so because he has been unable to give them separate lecture rooms, etc., but women cannot pursue architectural studies to advantage in a private apartment. Co-education is a privilege as well as a necessity.

I must not forget to tell you that Philadelphia published what was probably the first architectural book written in this country by a woman. From Mrs. Tuthill in 1848 to Mrs. Van Rensselaer in 1891, is a greater stride than progress usually makes in one half-century.

The Illinois University at Champaign, has graduated one woman who is a practicing architect and civil engineer in the far West; another will complete the course this year. Professor Ricker says that in architectural history women are his brightest pupils, but he finds the majority deficient in liking for the higher mathematics. Another instructor writes that a woman pupil submitted the boldest design of the year, while the most effeminate was the work of a man.

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The total number of women graduates from the various schools of the country can hardly exceed a dozen, and most of these seem to have renounced ambition with the attainment of a degree, but there are among them a few brilliant and energetic women for whom the future holds great possibilities.

There are also a few women drafting in various offices through the country, and the only respect in which they fall below their brothers is in disinclination to familiarize themselves with the practical questions of actual construction. They shirk the brick-and-mortar-rubber-boot-and-ladder-climbing period of investigative education, and as a consequence remain at the tracing stage of draftsmanship. There are hardly more successful women draftsmen than women graduates, but the next decade will doubtless give us a few thoroughly efficient architects from their number.

So much for the past and the present. If in what I say of the future your personal prejudices are offended, pray remember that you have bound me by no previous confession of faith.

The objects of the business woman are quite distinct from those of the professional agitator. Her aims are conservative rather than aggressive; her strength lies in adaptability, not in reform, and her desire is to conciliate rather than to antagonize.

The future of woman in the architectural profession is what she herself sees fit to make it. It is often proposed that she become exclusively a dwelling house architect. Pity her, and withdraw the suggestion. A specialist should become so from intrinsic fitness, not from extrinsic influence. Furthermore, the dwelling is the most pottering and worst-paid work an architect ever does. He always dreads it, not, as someone may have told you, because he must usually deal with a woman, but because he must strive to gratify the conflicting desires of an entire household, who dig up every hatchet for his benefit and hold daily powwows in his anteroom, and because he knows he loses money nearly every time. Dwelling house architecture, as a special branch for women, should be, at the present rate of remuneration, quite out of the question.

This brings us to another all-important point. The open sesame to the favor of our compeers and the respect of the public is "Equal Remuneration for Equal Service," and a strict observance of all the honorable traditions of our profession and its amenities of practice.

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In response to questions concerning the Women's Fair Building Mrs. Bethune said: "Such a building is talked of, but the idea of a separate Women's Board Exhibit, etc., expresses a sense of inferiority that business women are far from feeling. The board desires a woman architect, and the chief of construction has issued a circular inviting competition, notwithstanding the fact that competition is an evil against which the entire profession has striven for years, and has now nearly vanquished; it is unfortunate that it should be revived in its most objectionable form on this occasion, by women, and for women.

"The building will cost about $200,000, and the prize offered to the successful competitor is $1,000. This is all she is to receive. That is, she renders 'personal artistic service,' and also prepares her competitive drawings, all for one-tenth of the regular rate for full professional service. The extremely equitable arrangement made with the *appointed* architects for the ten large buildings is that each renders his personal artistic service for $10,000, *all* his drawings to be made at the expense of the commission. The sum total to be expended for the ten principal buildings is in the neighborhood of $6,000,000, making an average of $600,000 each. Thus each architect receives about one-third his regular full commission, for which he renders about one-third his full professional service.

"The proportion of remuneration to the architect of the Women's Building is about three-tenths of the average rate paid the already appointed architects for nearly similar service. It is an unfortunate precedent to establish just now, and it may take years to live down its effects."

Notes from Foreign Exchanges.

Professor Stier, of Hanover, has recently collected the statistics of all the competitions of Germany since 1868, the results of which he is shortly to inflict upon the public in book form. *La Semaine des Constructeurs*, for December 6, gives, however, the interesting points and the cream of all these investigations in a short form.

The 258 competitions that occurred brought out 11,256 designs, which were awarded 751 prizes, of a total value of $232,500. Prof. Stier has been able to find the actual practical results in only 214 of the competitions. In 109 of these 214 the first prize was awarded the work, while in 31 others, the second or third prizes were given the commissions. Also in 31 other cases a prize design was carried out, but not by the author; while in 43 remaining cases none of the designs offered were used. In resumé, of 9981 designs presented — at the 214 competitions — only 171 of them were ever carried out and the buildings erected.

There has been formed at Paris a society for the encouragement in France of the building, either by private individuals, corporations or societies, of houses which shall be both sanitary and economical. This society called the French Society for Cheap Homes is now in full operation and has already commenced to realize some part of its objects, which are the three following:

First: To gather together and put at the disposal of all interested parties every kind of information that can be asked upon the question of cheap homes, such as plans, leases, etc.

Second: To inaugurate courses of lectures having for their object the popularizing of the ideas of the association.

Third: To establish from time to time competitions and to encourage in every manner the construction and sanitation of cheap homes.

This society publishes a bulletin in which there is an interesting description of some tenements recently erected at Paris.

The Philanthropic Society built in 1889, on rue Jeanne d'Arc, a building approximately 70 feet front and 33 feet deep, containing three stores on the ground floor and five apartments of two and three rooms each on each of seven stories above, or a total of thirty-two tenants. The price of rent per annum of each tenement is at the amazingly small average sum of $45.40, or at the rate of less than one cent per superficial foot per month. Even at this low rate upon the total cost of land and building of over $35,000, there is a net income of $3\frac{97}{100}$ per cent upon the investment, as shown by a very minutely detailed table. And yet all these tenements are arranged in the most satisfactory manner from a sanitary point of view. The stairway is broad and well lighted and every room has outside light. Moreover, each tenement has its own water-closet, also with light from the outside. Other buildings of the same character are now in course of construction, both at Paris and in the provinces, which promise to be equally successful, both in a financial and sanitary point of view.

Architectural Kinships.*

BY IRVING K. POND, C. E., ARCHITECT.

"ARCHITECTURE was born with man," a French writer has said. I propose to take this for a text and to add "And architecture has kept on being born with man ever since the first occurrence of that interesting event." The real history of a man does not begin with the man himself but with his parents, even away back to the days of primeval chaos. I shall not dwell in extended thought on that fruitful time in our world's history nor do I intend to devote any further attention to the parentage of the race than to say that certain tendencies and peculiarities inherent in each denote almost to a certainty that man and architecture are offspring of the same parent stem, and being born at the same time, according to our text, must therefore be twins, and, as twins should, they have lived in pretty close relationship for a long time. When one comes to appreciate this he is where he can appreciate, too, what philosophers and thinkers mean when they say that a nation's life can be read in its art, and architecture is a very vital phase of art.

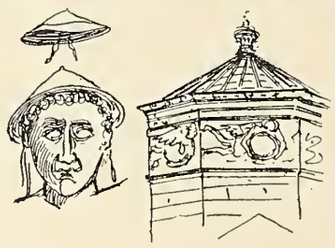


Fig 1

I would like to do a little in this paper toward the establishment of a general sympathetic appreciation of the near relationship existing between man and architecture, so that man may treat the good in architecture with reverence and respect, and not condemn the bad without first making a self-examination to see, if he can, what evil tendencies exist in him which may have a deleterious effect on his brother, and on his own and brother's art. How marvelously alike in their natures and how wonderfully near to each other man and architecture have been journeying down the years together, a few drawings will serve to suggest. Let us look at a few types, going back first to the days when types were pure. In Fig. 1 is the head of a rustic from an old Greek sculptured relief. The lines of the head covering are what we are to note. This covering is drawn detached just above. A fragment of Greek architecture also is shown in this figure. It does not require much of a stretch of the imagination to see that the same thought was parent to the lines of the sculptured head and the architectural dome. But we do not have to confine ourselves to types which have been preserved to us in marble. Here (in Fig. 2) is one sketched from life. A Moor from Tangier, a blood relation of the builders of the Alhambra, and at his side are fragments of the architecture of his race (taken from the Alhambra, the most beautiful specimen of Moorish art). Certainly the kinship is clearly marked here.

Fig 2

In Fig. 3 a Mongolian type is shown and words could not strengthen the growing conviction of kinship. In these three examples race types have been shown; but so subtle is the relationship between man and architecture that it shows where blood is weak or wanting, where social customs have served to mark the character of the man. I will give but one instance of this and that will be a very marked one. There came a time, at the end of the seventeenth and the beginning of the eighteenth century when man's body was worthless and his soul was worth even less, so in order to be at all presentable in society the body was bedecked with frills and furbelows, and the head was buried in puffs of curls and powder. If one cares to know how soulless was the architecture of that period, he has but to look at the fragment (Fig. 4) of a Parisian church in the same style, the "Pigtail and Periwig Style" as discerning critics have named it.

Fig 3

Now it may be urged that all this does not prove that humanity and architecture are brothers; that this only goes to prove that architecture and clothes run in the same channels of style, or better, fashion! and that clothes do not make the man. But clothes are often—generally—pretty fair exponents of the man and he shows his character in his dress. But the faces in the types just sketched are not wanting in the same character that is expressed in the clothing and in the architecture. Perhaps we may get nearer to the idea that it is character and not clothes which lies at the bottom of all this by a peep at humanity without clothes. The idea I have in mind has been worked out so admirably by M. Espérandieu, architect, in his study of the "Ethnology of Architectural Forms," that I will reproduce his drawings as faithfully as may be (in Figs. A, B and C). If one were to take a composite spiritual and mental photograph of humanity at any particular period of time he would have a likeness of what Goethe called the *Zeit geist*, and which we, with less poetry but as much philosophy, call the "spirit of the age." This spirit has been more intense at certain periods than at others and it is at three such intense periods that we have the likenesses. In Fig. A we see the spirit of the Middle Ages, stern, if happy, certainly not joyous, with eyes not yet open to the light of culture and the arts, with the somber shadows of the night of the Dark Ages still brooding over it,—and beyond in the background is the spirit of the architecture of that time of rude awakening to incisive action. The mental camera had before it a more pleasing subject, though perhaps no more worthy of study, in the spirit of the renaissance (B). The race had lost its severity and hardness and was turning its face toward the calmness and satisfaction of classic art and culture. The eye is open to the light of truth and beauty, and the chin and lips show self-restraint. The architectural background can hardly be said to be out of harmony with the face. We could wish it might be, though, in the next exhibit (C). This is the spirit of that age which produced the "Pigtail and Periwig Style," and which, from this as well as from what we have seen of it before, might almost better be called the "fleshliness of the age" than the "spirit of the age." This evidently was a case of "high living and plain thinking." See how the porcine nose turns up. Wealth and luxury and social position do sometimes cause noses to turn up nowadays. The picture is not delightful and the spirit of the architecture is in harmony with it.

Fig 4

A

Having thus, at least to some extent, established the kinship of humanity and architecture, let us turn to another side of our text. The French writer says: "Architecture was born with man, for man always has had need of shelter." Now, considering architecture as art, I am free to accept the first part of the proposition, but must take issue with the second, for the two do not go together. The writer might have said: "The need of shelter was born with man for man always has needed shelter," or he might have said: "Architecture was born with man, for man always has felt the need of beautifying his structures," and I could have agreed with him all around. For this marks the distinction between architecture and building, the one is for giving pleasure and the other, shelter. Of course, in architectural practice today one has to take into account the strength of materials and a thousand mechanical necessities, the laws of sanitation and healthful living, shelter and convenience and comfort and all that, but just now we are looking at architecture from the standpoint of beauty, which, after all, really *is* architecture, for it is the only thing about architecture which is unchanging, which lasts and is real, for comfort and convenience and such like necessities change ever with changing and developing life and environment; but who shall say that a Venetian palace had ceased to be beautiful though no one of us would care to live in it today! Who would say that a Greek temple or a Gothic cathedral had ceased to be beautiful, though who of us would care to sit through a seventy-five-minute sermon in either today! We must not judge beauty too critically from the standpoint of comfort and convenience, for one appeals to our spiritual and intellectual selves and the others to our physical bodies. Although the age is becoming decidedly materialistic, we have not quite unified body and spirit, however closely we may have allied them. I do not mean to say that we can ignore physical comfort in our idealization of things which have to do intimately with the physical man, but we must remember that when certain beautiful forms were evolved in ages past, physical conditions were other than they are now, and what we deem necessities now often are only affectations due to overwrought and overstrained social conditions.

B

C

*From a lecture delivered in the University Extension Course at Hull House, Chicago, March 12, 1891, illustrated by charcoal sketches which are redrawn for THE INLAND ARCHITECT by the author.

We have seen how a specific idea of beauty has dominated the character of man and architecture at a certain time and locality, now we may touch upon this idea a little more in detail. In Fig. 5 is presented in simple terms, the idea of beauty as conceived by the Greek,

Fig 5

the Egyptian and the Arabian races, and the ideas which dominated the work of the Romanesque (or transition) and the Gothic schools. We can here see how they blend one into another though the types are so distinct. This makes it difficult to prove that each race was animated by a unique or original inspiration, but suggests rather the possibility that each idea will in the course of time and study be traced to that fundamental idea which was born with the first man. I do not wish to imply that man was born with any one of the forms I have set down before his physical eye, but that he was born with an

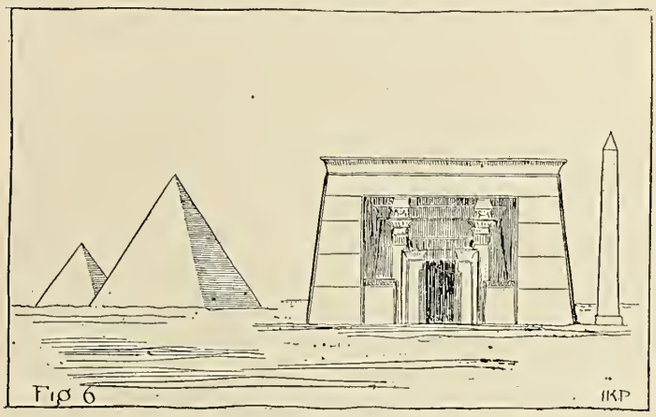


Fig 6

inspiring idea in his mind which, by reason of his own development and the nature of circumstance and environment, caused him at last to express his idea in one of these many lines. Material as well as esthetic conditions have contributed to the evolution of these forms and ideas, for with all his spiritual and intellectual qualities man is still a creature of the earth.

This suggests an interesting phase of our subject, which with propriety may be enlarged upon here. The student of men and man-

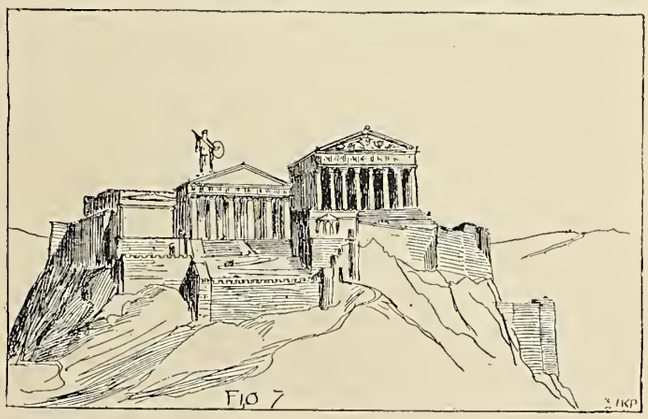


Fig 7

ners has been impressed by the fact that men are of the earth, earthy, and this in no mean sense, but that the characteristics and tendencies of men vary with the varied natural surroundings. Thus men under clear southern skies are different in temperament from those under dull and ragged northern skies; the instincts and impulses of the mountain dwellers are not just the same as those of the dwellers in the plains.

The student of architecture has learned that the same conformability to natural conditions and physical environment is expressed in the architecture of these differently configured portions of the earth's surface. I shall illustrate by sketching a few simple types, although the law in its general application is just as far reaching and subtle as was that which differentiated the "Pigtail and Periwig Style," during the complex and changing social conditions of Europe in the period of the Renaissance. First as to types of architecture under clear southern skies we see (in Figs. 6 and 7) that the outlines are pure and simple. Fig. 6 presents various Egyptian types, while Fig. 7 is a view of the Acropolis at Athens (restored). Now, by reference to Figs. 8 and 9, we see the character of architecture under northern skies — outlines are broken and forms are not pure and simple. Fig. 8 is a distant view of the cathedral at Chartres (sketched from a salon

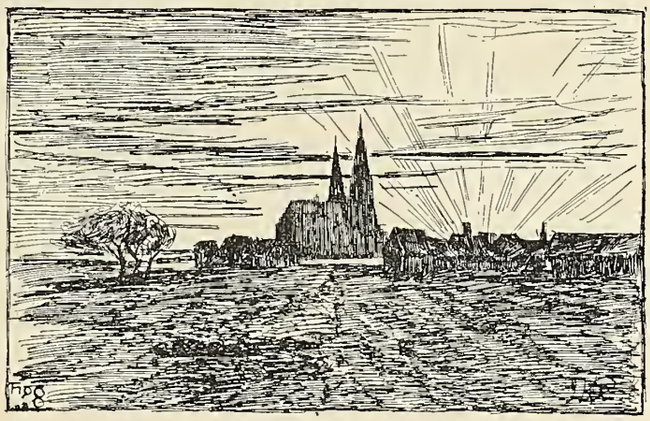


Fig 8

picture by A. Ségé). Fig. 9 is a sketch of the medieval castle of Rheinstein, in which we may notice, what already has been remarked, the frowning severity of the architecture of those times.

Now other and very peculiar characteristics due to dissimilar natural conditions are made apparent in these sketches, that is, in level countries under clear or clouded skys the forms are pyramidal (Figs. 6-8), while in mountainous districts, masses are cubiform. This diversity of form and feeling is no more of a happening in architecture than it is in man, and if studied closely will be found to hold in widely separated districts and under complicated social conditions. Undoubtedly the types sometimes will be found to be more mixed than in the instances cited, for men since the times which produced

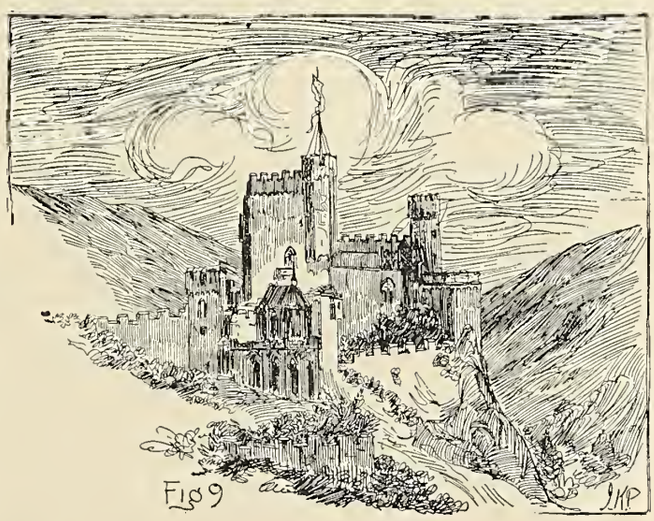


Fig 9

these types have been mingling more and have been influenced more and more by each others life and art and letters.

In these examples we have made reference to the general outlines and masses only, but there are laws which apply with equal force to the details of the embellishments of the structures, a study of which will demonstrate more clearly, if possible, the wonderfully sympathetic relationship between architecture and the geographic and atmospheric conditions among which it has arisen.

So we have succeeded, not only in establishing close kinship between humanity and architecture, but we have gone so far as to indicate that the great globe itself is one of the family, and poets before our time have defined her relationship and called her Mother Earth. If she be indeed mother she must be wonderfully at one with the divine father spirit which breathed through her into us and into our arts and architecture and made us all of one family, so that where man is happy, there the earth and sky and man and art join together in the tender harmonies of one eternal symphony.

Monument of Eugene Delacroix.

THERE has just been placed upon the marble pedestal in one of the walks in the gardens of the Luxembourg, the bronze bust of Eugene Delacroix and the group which M. Dalou designed for the decoration of this monument.

Described by *La Semaine des Constructeurs*, the group represents Time forcing Renown, which it raises in its strong arms, to render homage to the creator of so many masterpieces that were formerly unappreciated, but to which posterity has at length given the recognition merited by a great genius.

The group of M. Dalou shows a strong and vigorous handling which is a pleasure to see in these days. It is like the mythology of Delacroix himself, and as he understood it, who painted the "Labors of Hercules" and the "Triumph of Light over Darkness." It is a pleasing idea to have placed below the bust of this scorner of the superannuated rules of the school the figure of Renown being forced to place palm branches at the feet of the man whom the jury classed as the very lowest in the competition for the Grand Prize of Rome, where he competed.

Time has avenged their contempt, and Renown, thanks to this old Chronos, who finally puts everything in its right place, at length comes to lay the wreaths at the feet of him who will always remain one of the greatest masters of French painting.

Apropos of the unvailing of the Delacroix monument at the Luxembourg, considerable has been written of the process of bronze casting known as the *cire perdue*, employed by the artists of the Renaissance and those of the eighteenth century. We have believed that it might be interesting to our readers to know in detail this process, and therefore applied directly to M. Dalou, the sculptor of the Delacroix monument, who has furnished the following description:

This process, which is now in general use scarcely anywhere except in Japan, was formerly commonly employed in France, and M. Bingen, who cast the group of Dalou at the Luxembourg, simply renewed it. The sculptor, as is known, first makes a sketch of his work in clay. When he is satisfied with it another is made, especially if a large monument, at a half or quarter full size, and then his assistants finally render the work at its full size. Here the difficulty commences, for the object is to transform into bronze with as absolute a fidelity as possible the model first executed in clay. This is accomplished by turning over to the founder the plaster model, of which a mold is taken. Into this mold, which is also of plaster, the founder runs a special composition composed of earth, powdered brick and sometimes of cow dung. In this manner a copy of the work is obtained which, however, after having passed through this first operation has been already somewhat deformed. This copy, known as the core, is now scraped and a thickness of from $\frac{1}{2}$ to $\frac{1}{4}$ of an inch removed from the entire surface. This work finished, the core is then replaced in the mold in which it was made, and melted wax is run in to fill the space removed by the scraping. Thus is obtained a new copy, naturally even more deformed than the original, but covered with a fairly thick coating of wax, that is to say, a malleable material which the sculptor can retouch and work over, giving it the primitive character of his work. This then is the important advantage offered by this method of casting. When this copy covered with wax has been entirely retouched by the sculptor, when he has given it with all precision its final form that he wishes, it is turned over to workmen, generally women, who then commence a work infinitely fine and minute which requires weeks and weeks of care.

With very small artists' brushes the whole surface of the wax is covered with a light coating of a similar composition as that of the core. This coating is followed by a second, then a third, then a fourth, little by little, with what slowness can be imagined.

When it has obtained a thickness of about one-half inch larger, brushes are employed. Then this coating, becoming gradually more solid and more adherent to the wax, small masses of earth and then larger are employed.

Thus is obtained a mass quite without form or beauty of appearance, but the work exactly as it came from the master's hand is intact under this coat of mail. It has suffered no deformation, and no touch of the chisel; even if the artist had had the freak to make an impression with the end of his thumb, he can be sure that the trace has not been in the least effaced by the delicate and minute work of these women who have covered it with earth, and that it will eventually be faithfully cast into the bronze. It is now required to withdraw the coating of wax between the core and the coating of earth, and to replace the wax by bronze; for this, two operations are necessary. First this shapeless object of a reddish color is placed in a furnace and heated to a white heat; the action of the fire at once melts and burns the wax so that no appreciable trace of it is left around the core. When the wax has disappeared, it only remains to turn in the molten bronze into the space left vacant between the core and the walls of the earthy coating. The simple enumeration of this long series of operations will certainly explain the profound emotion with which the founder of *cire perdue* breaks the exterior envelope of his mold to see if the final operation has succeeded.

For the casting in sand the thing is quite different. Here, the casting at one single flow is almost impossible for works of large dimensions, the sand not being cohesive enough. But this casting has another and much greater inconvenience, namely, the impossibility of retouching. In fact, the sculptor who intends to have his work cast in this manner, furnishes the founder the clay model as it has left his hands. From this the manufacturer runs it in plaster; first transformation and also first change and deformation, for it is one that the artist can not remedy since plaster cannot be satisfactorily retouched.

From this plaster a mold is made directly in the sand, second transformation and second deformation more important even than the first, since the packing of the sand, however carefully it may be done, injures the plaster model. From this mold in sand a core is made and scraped the same as in the other process, only that this core is replaced at once in the mold and the bronze when poured in occupies the space between this core and the mold. This operation is, of course, much simpler, more rapid and more sure in its results. But the work comes out in sections difficult to put together, and lacking that exquisite purity which every artist longs for in his work, and ought to require for a statue or a group destined to pass to posterity.

If the *cire perdue* was not so expensive it would evidently be preferable to the casting in sand. The statue of Louis XV, which formerly decorated the Place de la Concorde, cost for the execution of the work alone nearly $70,000, while the bas-relief of Mirabeau and the Marquis de Brézé, cast after the originals of M. Dalou, have cost $10,000. Thus the *cire perdue* can only be employed for masterpieces, but its fineness of execution is far superior to anything that can be done by the ordinary casting.

Progress in Columbian Exposition Work.

ON February 23 the World's Fair Commission of Architects met in Chicago and submitted sketches for the several buildings. As a result, on February 27, Chief of Construction Burnham submitted to the National Board of Control a report on the buildings and work of the Commission of Architects as follows:

To the Honorable the Board of Reference and Control:

I hand you herewith the plan of grounds adopted by commission — with the final revised plans and an estimate of acreage in buildings. Upon more mature study it was found desirable to condense, and some of the buildings have been made smaller with the expectation that whatever additional room is needed will be secured by inexpensive annexes to be built as space is demanded. Spaces between buildings also have been somewhat reduced and the forms originally given to several of them have been changed to better utilize the area devoted to them.

The horticultural building (W. L. B. Jenney, architect) is moved from the north end of the park to a position corresponding with that of the agricultural building on the original plat (McKim, Mead & White, architects), which has been moved to a more direct relation to live stock and given a position on the grand court. Live stock (Holabird & Roche, architects) has been given a better position just south of agricultural and machinery buildings, with a main entrance into their ground between these two buildings, and has been given more room by pushing all the buildings further north and getting more compact arrangements. The most marked change is that of the railroad approach in the southwest portion of the grounds — a large loop of six parallel tracks, with platforms, etc., so arranged as to carry back and forth a large number of persons hourly. This has been accepted as a great improvement over the old arrangement. Preliminary plans for the nine principal buildings of the exposition have been prepared by the several architects, and are now being completed and conformed to the suggested modifications which further study and the added professional skill of the Commission of Architects have brought about.

Instead of the straight pier leading out of the center of the main court as originally intended, it is proposed to construct an outer basin in form of a peristyle of columns, each representing one of the states of the Union, and all surrounding a colossal and emblematic figure, probably that of the Republic. This is the great opportunity for the central and purely decorative and symbolic feature of the exposition, standing at the end of the great court on the one side, and at the landing place for all visitors by water on the other.

The north end of the park is to be given up to different state buildings, and to buildings for foreign nations. A preliminary plan has been prepared, showing a proposed disposition of those on the supposition that they will be limited in size and shall be used for headquarters buildings.

The Midway Plaisance is reserved for any additional structures for which there is not room here.

The transportation building (Adler & Sullivan, architects) is a new feature. It was in machinery building (Peabody & Stearns, architects), but now occupies extensive space by itself—competent, with its annexes, to cover all required of this department. The woman's building has been added as indicated, and the 1,000-feet steel tower will probably be built outside of Jackson Park at the head of Midway Plaisance, and by private enterprise. In general, the acreage under main roofs has been increased, and that under annexes can be extended ad libitum. The character of the buildings is as described to you personally when here, and until we can go somewhat further the specifications for them cannot be made. Indeed, the specifications will not be all finished till the buildings are nearly completed. I can say, however, that the pier is to be substantial and closed in toward the north so as to form a safe harbor; that on its water end is to be a pavilion of classic style, simple and severe, open on all sides, and containing restaurants, band stand, etc. (Burling & Whitehouse, architects).

The agricultural building is to be largely iron and stone, in a decorated style of classic work, and its annexes of simple, inexpensive form, extending along the lake and also directly back toward the stock show. In these annexes will be the brewery, the sawmill, and the dairy, the latter at the southeast corner of the park; these buildings to be designed into a picturesque mass as seen from the lake. The space between agriculture and machinery is to be closed on the south by an ornamental screen and entryway to the stock show. The Machinery Building is to be of the same type of architecture, as will all buildings surrounding the court, and it is to have annexes inclosed by the railroad loop and entered by subways.

The administration building is to be the grand feature, surmounted by a dome forming the central figure of the grand court and commanding the buildings of the fair; and through this building, at grade, the people will enter from the railroad loop. (Richard M. Hunt, architect.) Both the mines and electric buildings are to be kept in harmony with the architecture of the court, as is true of the manufacturers' building. (S. S. Beman, Van Brunt & Howe, and George B. Post, architects, respectively.)

The transportation building will be in Romanesque style, having three great doorways toward the east and one at either end. The horticultural building will be of glass and iron, with a great central dome and dome-like pavilions at the ends. The woman's building is not yet designed. The fisheries building will be a colored exterior of Spanish style. (Henry Ives Cobb, architect.) The elevated road is still undetermined, but will run around the park to shorten the great distances much as possible.

The work is now progressing, and we hope soon to exhibit rapid advancement on the grounds.

All of which is respectfully submitted,

D. H. Burnham, Chief of Construction.

At the same meeting of the Board of Control Chief Assistant Engineer E. C. Nourse submitted the following estimate of acreage:

For fisheries building, 1.7 acres; fisheries annex, 5; government building, 3.6; manufactures, 31.2; electrical, 5.6; mines, 5.6; agricultural, 9.2; machinery, 9.7; annex for same, 8.7; annex power (machinery), 8.3; horticultural, 5.7; woman's building, 2.3; administration, 1.4. Grand total, 102.7 acres.

After the reading of the report and after viewing the designs, the plans were formally adopted in the following resolution:

Whereas, The Committee on Buildings and Grounds of the World's Columbian Exposition has submitted to this board the following communication from D. H. Burnham, Chief of Construction, accompanied by a plan showing and defining certain material changes, modifications and extensions; and

WHEREAS, This board has duly investigated and carefully considered the subject; therefore

Resolved, By the Board of Reference and Control of the World's Columbian Commission, that the changes, modifications and extensions indicated, proposed, and shown by the said communication, and the plan aforesaid approved by said committee, be and the same are hereby approved in a general way, and the assent of this board is given thereto;

Provided, however, that this action shall not be so construed as giving the assent of this board to the abandonment of the buildings necessary and adequate for the exhibits allotted to Department K, and so much of the exhibits in Department L as are usually grouped therewith and the ground space properly appropriate thereto, which are specifically provided for in the plans heretofore adopted, it being understood that this board reserves the right to approve and assent to any such further modifications or extensions as may be required to meet exigencies which may be suggested and approved by said committee.

Resolved, That a certified copy of this resolution be immediately transmitted by the secretary to the chairman of said committee.

On March 6, at a meeting of the Board of Directors, the plans were finally approved.

Association Notes.

AMERICAN INSTITUTE OF ARCHITECTS.

Mr. George C. Nimmons, Chicago, is acting as secretary *pro tem* of the American Institute of Architects on the authority of President R. M. Hunt. He is to hold the position until the next meeting of the Executive Committee. He has had charge of the final work on the proceedings of the last convention, which are nearly ready for circulation.

CHICAGO ARCHITECTURAL SKETCH CLUB.

At a regular meeting of the Chicago Architectural Sketch Club, held Monday, March 23, notice was received from the Art Institute directors that the rooms occupied by the club must be vacated during the coming spring or summer, as they were wanted for school purposes. A committee consisting of three was appointed to find new quarters—Messrs. Williamson, Wagner and Youngberg. Mr. Kleinpel was unable to be present to read his paper on "Dormers." With his regrets he presented a liberal donation to be placed with any fund that the Executive Committee might choose. Report on piano competition was received. There was a tie for first place: (A) Emery Roth, (B) P. C. Stewart; second place, H. C. Trost; third place, E. C. Jensen. There were eighteen drawings in all. Water-color competition from photograph was also displayed, but for lack of time artists' report was deferred. Mr. Louis Muller, Jr., was elected an honorary member:

NEW YORK CHAPTER OF AMERICAN INSTITUTE OF ARCHITECTS.

Extract from minutes of the New York Chapter of the American Institute of Architects, of March 11, 1891.

* * * * *

The secretary then offered the following resolutions, which were unanimously adopted:

Resolved, That this Chapter feels that it has sustained a severe loss in the death, on March 4, of its president, Mr. Emlen Trenchard Littell, the architect of Jefferson Market, of several business buildings, of the Church of the Incarnation, and of some charity buildings and a chapel connected with the Protestant Episcopal Church, in New York; as also of St. James Church in Philadelphia, and of churches and other buildings in Ogdensburg, Canandaigua, Palmyra and elsewhere.

Since the formation of the Chapter he has held the presidency several times, and has constantly been placed on its committees, in which, and other like positions, he has unswervingly used his influence in the interests and for the honor of his art and his profession; while as one of the three members, since its organization, of the Willard Architectural Commission, his advice and suggestions, under, occasionally, very discouraging circumstances, have been of the greatest value to his colleagues and to their responsibilities.

Resolved, That the Chapter adopts, as a fit expression of its own sentiments in relation to its departed president, the following characterization of his qualities written the day after his death by one of our divines.

In an age of self-seeking and unusual rivalry, Mr. Littell was the type of the thoughtful, sober-minded, pure, upright man of honor who pursued his profession for the love of it, and made everything he touched the better for his contact with it. The memory of such a man is a rich inheritance. The world was poorer when he left it.

Resolved, That these resolutions be spread on the minutes of this Chapter, and that a copy thereof be transmitted to his widow and family.

WISCONSIN STATE ASSOCIATION OF ARCHITECTS.

At a meeting of architects held at Milwaukee the following expression of regret was adopted, and its publication in THE INLAND ARCHITECT requested:

Feeling that by the death of John W. Root our profession has lost a member whose genius was so marked, and whose work was so full of beauty, strength and originality as to rank him as a leader in the architectural movement of today, and whose unceasing efforts toward the organization and elevation of the profession proved him to be a man of broad sympathy, great earnestness of purpose and devotion to the best interests of his fellow-workers, we, the Milwaukee members of the American Institute of Architects and of the Wisconsin State Association of Architects, desire to hereby express our profound regret and sincere sorrow that death has taken away one who, as an architect and a man, had won our respect and honest admiration; one whose influence for good will bear lasting fruit, and whose memory will always be a source of inspiration to those who look, as he did, to an ever broadening progress toward the fullest development of one of the noblest of the arts.

THE ARCHITECTURAL LEAGUE OF NEW YORK.

The regular monthly dinner and meeting of the Architectural League of New York was held at Morello's on Monday, March 2, at 6:30 P.M., President Russell Sturgis in the chair. About fifty members sat down to dinner, after which William Burnet Tuthill, of New York, read an interesting paper entitled "The Audience Hall," being an exhaustive treatise on acoustics, particularly bearing on the Carnegie music hall, of which the author, in connection with Architects Adler and Sullivan, of Chicago, was the architect.

The paper was discussed by Russell Sturgis, Frank A. Waller, A. F. D'Oench, Edward H. Kendall, George W. Keister, Warren R. Briggs, C. A. Rich and Thomas Tryon. Mr. Tryon then read the report of the committee appointed to consider the question of a suitable memorial to their late associate, Henry Ogden Avery, which should also be a recognition to the liberality of his parents in the endowment of a library fund at Columbia College. President Sturgis stated that the gift was made to the library of Columbia College, as that was a depository which was open to all and the books could be consulted at almost all hours by the public. The committee recommended a bronze tablet to be placed on the walls of the alcove of the library which had been assigned by the college to the Avery collection; this can be removed should the authorities be enabled to devote a larger space to it, as is anticipated in the near future.

The League accepted the report and authorized the committee to order the tablet at a cost of about $150, and have it placed in position on the anniversary of Mr. Avery's death.

Warren R. Briggs then offered the following:

WHEREAS, The Architectural League of New York, through the undersigned, who have been appointed a committee for the purpose, deplore the great loss it has sustained in the death of John Wellborn Root, one of its most honored members, therefore

Resolved, That this society, composed of his professional brethren, record his death with sorrow and regret that a career so full of brilliancy and promise has been abruptly terminated. By his untimely death, the profession has lost one of its most accomplished practitioners, and his associates, a true and genial friend.

Resolved, That the sympathy of the League as a body be extended to the bereaved family of the deceased in their great affliction.

RICHARD M. UPJOHN,
GEORGE B. POST,
WARREN R. BRIGGS, *Chairman*.

It was ordered, That these minutes be spread upon the books of the League, and copies transmitted to the family of the deceased and to the leading professional journals for publication.

Among other gentlemen present were: Messrs. Henry J. Hardenbergh, Henry F. Kilburn, F. L. V. Hoppin, William B. Tubby, Charles T. Mott, Frank E. Wallis, William A. Bates, E. P. Hapgood, Edward H. Clark, Henry W. Thayer, John Galletly, Edward Kemeys, the sculptor, Vice-President William C. Coffin, and T. Hugh Boorman, of *Architecture and Building*, whose report has been made use of in the above.

CINCINNATI BUILDERS' EXCHANGE.

The annual meeting of the exchange and the annual banquet was held March 2. Arthur McAlester, President of the National Association of Builders, was present. The officers elected were as follows: President, D. W. C. Bellville; first vice-president, Thomas H. Curry; second vice-president, Simon H. Strunk; secretary, Lawrence Mendenhall; treasurer, J. M. Blair. Directors—For two years: Henry Wagner, A. Colter, G. E. Mason, C. B. Stevenson, H. E. Holzinger. For one year: M. P. Scully, J. W. Robinson, D. Flaherty, C. M. Fenner, L. B. Hancock. Board of Arbitration—W. J. Tanner, J. C. Carter, W. A. Megrue, A. F. Schuyler, F. M. Kealy. Board of Appeals—J. C. Harwood, Sam Tapping, J. Grace, S. D. Tippett, J. F. Tuttle, T. A. Murray. A. F. Schuyler and J. W. Asher were the judges, and W. Tappan and W. Foster were the tellers.

PHILADELPHIA T-SQUARE CLUB.

The first regular meeting of the Philadelphia T-Square Club for the year was held on Wednesday evening, January 21, at the office of Mr. Frank Miles Day, 927 Chestnut street. The subject of the evening's competition was "A Seal for the Club." Drawings were submitted by Messrs. Lea, Hays, Parmeter, Coates, Jamieson, Titus and Boggs, and mentions awarded as follows: First mention, Mr. Frank Hays; second mention, Mr. J. Jamieson; third mention, Mr. Crawford Coates, Jr.

The following officers were elected for the ensuing year: President, Mr. Frank Hays; vice-president, Mr. Wilson Eyre; secretary, Mr. Barton Keen; treasurer, Mr. William Bailey; executive committee, Mr. Frank Mead, Mr. Crawford Coates and Mr. John Stewardson.

The subject of the next competition is "A Forty-Foot Front for a City Club."

Required—A design in the Italian Renaissance style. A one-eighth scale elevation and section in pencil. Pure line drawings only with the openings in the elevation finished in plain washes of India ink.

ST. LOUIS ARCHITECTURAL CLUB,

After a number of unsuccessful efforts to establish an architectural sketch club in St. Louis, the draftsmen have at last a plan that may prove to be the means of giving the Fellows a successful organization. All the clubs so far started seem to have failed, because of lack of interest in work and on account of unsociability of the members.

The new scheme is to have no constitution or by-laws, simply place the affairs of the club in the hands of an executive committee of three members, whose duty for one year will be to furnish entertainment at all meetings, choose different chairmen to conduct business meetings, prepare competitions, choose judges, elect and dismiss members, etc.

The name of the club is the St. Louis Architectural Club and the first executive committee will consist of P. P. Furber, chairman; J. L. Wees treasurer, and D. D. Kearns, secretary.

The first regular meeting was held January 24, 1891, at which an instructive series of cement tests with informal discussion elicited valuable information.

Mr. Furber read a fine paper on plumbing, and with the aid of charts placed the subject in a clear manner before the members present.

The first competition was announced and promises to bring out some good work from the boys as it is novel and thoroughly practical.

It is to finish up in the same style as the structure itself the spire of a celebrated unfinished church here in St. Louis. The original structure stands in a picturesque spot and as its architectural style is a pure gothic of the early English period, it will afford abundant scope for study of history as well as sketching, drawing and rendering.

Meetings of the club will be held twice in each month and competitions will be due once each month. All communications will be attended to by D. D. Kearns, secretary, in the Turner building.

PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS.

An excellent report of the organization of the Province of Quebec Association of Architects is given in the current number of the *Canadian Architect*, of which an extract is made:

In response to a circular sent out by the Committee of Organization, Messrs. Nelson, Taylor, Hutchinson, Doran, Dunlop, Raza, J. B. Resther, Clift and Hodson, the following architects assembled in the Mechanics' Institute building Montreal, on October 10: A. C. Hutchinson, J. Nelson, Charles Baillairge, J. F. Peachy, A. F. Dunlop, A. Raza, M. Perrault, J. W. Hopkins, V. Roy, W. T. Thomas, W. E. Doran, F. X. Berlinguet, W. McLea Walbank, Joseph Verne, A. J. Pageau, S. Lesage, J. A. Proudfoot Bulman, J. Z. Gauthier, A. J. Taylor, J. Y. Resther, Theo. Daoust, G. E. Tanguay, D. Oulette, J. H. Bernard, J. Wright, L. R. Monthiault, G. G. Languedoc, J. A. Chause, R. Findlay, A. Gendron, L. C. Everest Page, H. Stavely, J. B. Resther, Christopher Clift, W. H. Hodson.

A. C. Hutchinson was unanimously elected chairman and Christopher Clift secretary of the convention, which proceeded to discuss a draft of constitution and by-laws, which was amended and adopted section by section.

The following officers were elected: President, J. W. Hopkins, R. C. A.; first vice-president, F. X. Berlinguet; second vice-president, Victor Roy; members of council, A. C. Hutchinson, R. C. A., A. F. Dunlop, R. C. A.; A. Raza, A. T. Taylor, F. R. I. B. A.; M. Perrault, J. F. Peachy; treasurer, W. E. Doran; secretary, C. Clift.

The convention was followed by a luncheon, at which speeches were made by Architects Berlinguet, Roy, Hutchinson, Brown, Doran, Hopkins, Taylor and Dunlop, and Mr. Mortimer, representing the *Canadian Architect*.

TEXAS STATE ASSOCIATION OF ARCHITECTS.

The State Association of Architects held the second session of their sixth annual convention on January 21, at Fort Worth. The most important question discussed was as to the rights of architects under the mechanics' lien law, their status now being that they are not mechanics or artisans under the law, and therefore not entitled to its privileges. It was decided to ask the legislature to change this. The following officers were elected for the ensuing year: Geo. W. Stewart, Dallas, president; Geo. E. Dickey, Houston, first vice-president; S. B. Haggart, Fort Worth, second vice-president; A. O. Watson, Austin, secretary; S. P. Herbert, Waco, treasurer. The next meeting will be held at Galveston on the third Tuesday of January, 1892.

EDINBURGH ARCHITECTURAL ASSOCIATION.

On the afternoon of Saturday, February 23, the members of the Edinburgh Architectural Association visited Edinburgh Castle, and under the leadership of Mr. Hippolyte J. Blanc, inspected the Argyle Tower, so tastefully restored a few years ago, and the Old Parliament Hall, the restoration of which has just been completed. The visit being of an unusually interesting character, the members of the association turned out in strength, and they could not well have found a better guide than the architect of the restorations.

Mr. Blanc called his first halt on the rocky path which leads under the tower, and began by describing its external features. Prior to the reign of David II, he said, the castle had fallen into a dismantled condition, but after a sojourn in France that prince came here to reside and took upon himself its reconstruction on the then known lines of castle architecture. It was he who constructed what was known as David's Tower, and not, as was sometimes thought, David I, the "sair sanct," whose tastes lay more in the ecclesiastical sphere. Continuing, and connected with this by means of a curtain wall, was the Constable's, or Gate Tower, or the Argyle Tower so called. Both these were sufferers in the siege of 1573, David's Tower being completely demolished. Mr. Blanc, however, fancies that he has found traces of the foundation of that tower within the half-moon battery. He has seen there the remains of old masonry and of a pointed arched doorway, indicating the architectural features of the period. In the ponderous thickness of the wall of the gate tower the features of this period are not to be mistaken. On the front of the gateway there are expressions characteristic of the sixteenth century, but these are explained by the fact that after the siege referred to, the Regent Morton imposed on the old tower gate a new face with the details favored in his own time. When the workmen were engaged taking down some of the masonry above the gate, for the purpose of carrying out the work of restoring the tower, this face of hewn stone was found to be merely a veneer. On the face of the old wall then exposed there were seen what were undoubtedly the marks of bullets. The old wall was of undressed stone, as was all the masonry of the early period to which the tower belongs; and on its west, or unassailed front, this characteristic remains uncovered.

The tower takes its present name from the fact that the Marquis of Argyle was confined in it during the night before he was executed. The apartment in which Argyle lay is in the old masonry, immediately below the restored portion, and with its old damp walls of enormous thickness, its low-vaulted roof, its restricted space, its feeble light struggling through a deep and narrow recess "flecked with bars," is as gloomy a dungeon as one could well imagine, notwithstanding its altitude. Passing from the Argyle Tower, Mr. Blanc led the company to the old palace courtyard, on the very summit of the rock, and pointed out a number of interesting features on the exterior of the buildings. That portion of the palace which bounds the north side of the courtyard, with the exception of the corner joining the hall, is of no great antiquity, and has features in common with Heriot's Hospital. The most noticeable of these is an octagon staircase projecting from the line of the wall. The Parliament Hall, Mr. Blanc assigns to the reign of James IV, but he thinks it undoubted that a similar hall occupied the same site before that period, as the inner wall of the present building rises from the arched roofs of vaults of a more ancient character. It is now perfectly certain that in this hall many meetings of the Estates of Scotland were held, though during the past two centuries its applicability for this purpose was so obscured that the fact became well-nigh forgotten. The interior is now beautifully restored, and when thrown open to the public will certainly repay more than one visit. The greatest care and research have been bestowed upon the work, with the view of making it in the truest sense a restoration; and though scarcely more than hints could be obtained of the original style these have been followed out with the happiest results.

When the work was begun the hall was found divided into three floors, and these again into apartments to serve the purposes of a garrison hospital. All this was removed and the whole interior practically reconstructed. At the west end there is a small gallery, under which a few feet of the hall are cut off by a carved screen. The roof is of oak, and the arched rafters have a noble sweep. The corbels, or stone rests from which great rafters spring, have been left as they were found, and are points of particular interest. Each is treated with a design or coat of arms in the form of a shield. On one of them are the initials of James IV, flanked by the thistle and the rose — perhaps the earliest instance of these two emblems being brought into union. The union here, no doubt, refers to the marriage of James and Margaret of England. On another is the fleur-de-lis, and it may be taken as indicative of James' position as one of the knights of the queen of France, by whose wish "that champion of the dames" went to Flodden. Another of these, on which there is an ecclesiastical device, was puzzling until it became known that James was one of the canons of Glasgow Cathedral. On the end of the smaller rafters are painted the arms of the constables of the castle. The floor of the hall is of stone, arranged in squares, which, at the upper end, where it is supposed the dais would be, are of marble. The windows are precisely in the position and of the form of the originals — points which were found indicated in the masonry outside. They are filled with stained glass bearing the arms of the Scottish kings down to James VI. Some difficulty was experienced in finding any trace of the original fireplace, but ultimately the soot-track was discovered and the location decided. The new fireplace, of the old gigantic type, set off with four graceful figures, is one of the most handsome features of the hall, with which as a whole the visitors were unanimous in expressing delight. As is well known the citizens of Edinburgh are indebted to the late Mr. William Nelson for this addition to the attractiveness of their city, and on this occasion Mr. Blanc did not neglect to make fitting reference to that gentleman's praiseworthy public spirit and liberality. Mr. Blanc himself was thanked for his services as leader, on the motion of Mr. Scott Dalgleish.

The company afterward visited the Register House, the architectural features of which were pointed out by Mr. W. W. Robertson, H. M. Board of Works.

Our Illustrations.

Pillsbury Memorial Town Hall, Sutton, New Hampshire, L. S. Buffington, architect, Minneapolis, Minnesota.

Accepted design, competition for office building for Mr. Fred Pabst, corner Wisconsin and East Water streets, Milwaukee, Wisconsin. S. S. Beman, architect, Chicago.

Sketch for United States Government Building of World's Columbian Exposition, James H. Windrim, Supervising Architect, Treasury Department. Elevations and floor plan are shown. An alternative sketch is also presented. While final selection of the design for the United States Government Building has not been made, one of the designs shown will be probably built with, possibly, modifications necessitated by cost and requirements.

Butler Gallery and Reading Room, Chicago, Pond & Pond, architects. The first story of this building is to contain a reading room and delivery station for the Chicago Public Library. The second story will be devoted to a gallery for the exhibition of painting and other works of art, and a class room for students of art. The material for the fronts is buff and red pressed brick, the ornament being done in the red. The building is being built by Mr. E. B. Butler to aid in carrying on the work at "Hull House," 335 South Halsted street.

The Groveland Apartment Building, for Howard & Berwin, Chicago. John Duncan, architect. The building presents a very substantial appearance. The massive fronts, including the bays and corners, are entirely of stone, which with the interior arrangement renders the building practically fireproof. The main entrance of polished Dakota pink jasper is the first one of its kind in Chicago, and shows the beauty of this stone to advantage. The jasper which is used for the basement and first story is so hard as to be be regarded impervious to the weather, and to be fire and frost proof. The stone platforms are of blocks of unusual length and size. Above the first story Kasota pinkstone is used, and blends harmoniously with the jasper below. All the stone was furnished by R. W. Maxton, Chicago.

Design of Illinois State Building, Columbian World's Fair, Chicago, W. W. Boyington & Co., architects. Front and end elevations, perspective and floor plan are shown. The building will be located in one of the most favored spots in Jackson Park, where on the south, for nearly one mile, there will be a view of a beautiful waterway, and

on the north and east will be the buildings of other states and foreign nations. The structure is to be placed on a terrace four or five feet high, and in front of the entrances there will be stone terraces with railings, statues and stone steps leading down to the roadway. The building in the main is 160 feet wide by 450 feet long, with the school-house, about 75 by 60 feet, taken out of the east end and within the building. The dome will be 72 feet in diameter and about 200 feet high, with a lookout about 80 feet high and another in the lantern about 175 feet high. The side walls are 47 feet high, while the center wing on the south will be 72 feet high, and both ends 54 feet, with a still higher projection in the center. On the north the Memorial Hall, which is to be fireproof, will form a wing 50 by 75 feet, while on the south will be placed the executive offices in a wing 75 by 123 feet, carried up three stories with a public hall in the third story. In addition to these offices there are to be others in each of the four corners for the departmental officers. The Memorial Hall will have a gallery. There will be a gallery around inside and outside of dome piers for viewing the exhibit hall. The building is to be embellished with fine carving and statuary, the material to be cast blocks of some approved composition. It is to be thoroughly lighted, first from the side windows, which are placed about fourteen feet above the floor to permit cases to be placed against the walls; second, with skylights placed in the flat roof of the side aisles; and, third, with continuous skylights on the ridge of a pitched roof or nave. Ventilation is provided for through windows placed a story above the flat aisle roof and the foot of the sloping roof over the nave. The interior of the structure is to be appropriately ornamented. It is thought that an elevator will run up through the center of the dome. If so, it is hoped to make it circular in form.

PHOTOGRAVURE PLATES.

(*Issued only to subscribers for the Photogravure edition.*)

Residence at Edgewater, Illinois. J. L. Silsbee, architect, Chicago.

Residence for Mr. D. Lenty, Cleveland, Ohio. Clarence O. Arey, architect.

Residence of Mrs. H. T. Greene, Pasadena, California. F. L. Roehrig, architect.

View in residence of Mr. George H. Lewis, Buffalo, New York. Marling & Burdett, architects.

Interior views, residence of Mr. R. T. Crane, Chicago. Charles S. Frost, architect. Three full-page plates illustrate the hall, dining room, parlor and library.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, March 15, 1891.

The contractors, architects, builders and manufacturers of building material are expressing more favorable opinions just now as to the season's prospects, although there are some elements of uncertainty yet to be eliminated before definite opinions can be formed as to the probable extent and volume of this year's building operations. Yet it can be pretty safely asserted on the authority of those who know, or ought to know all there is to be known on the subject, that this season's volume will not fall behind last season's in the aggregate. In some of the larger cities, but by no means all, there will probably be somewhat less building of houses, but this falling off will probably be compensated for in the increased house building in the smaller cities and towns, especially in the western and southern states. It is also probable that there will be more shop and factory building done this year than last. Railroad companies will also be heavy buyers of material, equipments and supplies. The industries are quite generally in a healthy condition. The iron and steel makers, while reducing their output for the time being, anticipate a very good year. Manufacturers of building material, lumber, planing-mill products, farm equipments and general foundry and mill work are all fairly busy. Collections are difficult, but easier financial conditions are in sight. The government has recently disbursed $30,000,000 in pensions. Western requirements, though not fully met by eastern lenders, are measurably met. Disturbing questions on financial legislation govern for future consideration. Meanwhile, the country will study the questions involved, and its opinion will probably be expressed in some future election in a way that will not admit of evasive action. From all quarters are what appear to be encouraging evidences of a general trade improvement. The railroads are making money. The farmers, though crowded, are still able to meet obligations. The great West is opening up new markets, and the whole country is keeping pace with the spirit of enterprise which has animated it for the year past.

Synopsis of Building News.

Baltimore, Md.—Architect W. H. Marriott: For the congregation of the Fourth Baptist Church, a brick and stone church; size 50 by 100 feet; two stories; cost $10.000.

A committee has been appointed to examine plans for the rebuilding of the Masonic Temple. They will spend about $125,000 on the building, which will be four stories. The advisability of building on a new site, instead of remodeling, is under consideration.

Buffalo, N. Y.—The spring season opens here very favorably, and work on new buildings promises to be very brisk.

Architect W. H. Boughton: For the Rev. H. A. Adams, a frame residence, to cost $7,000; contracts not let. For Mr. E. Anderson, a two-story frame residence; cost $6,500. Also has prepared plans for a frame chapel for the St. Paul's Parish Church.

Architect George J. Metzger: For Mayer & Wile, is preparing plans for additions and alterations to business block of stores and offices.

Architects Roberts & Balsam: For John Hamill, a three-story store and dwelling; size 20 by 60 feet; brick; cost $8,000.

Canton, Ohio.—Architect I. Jay Knapp: For the Reymann Brewing Company, of Wheeling, West Virginia, a Casino at Meyers Lake, Canton; size 146 by 100 feet; brick and frame; steam heat, electric light, and all modern conveniences; cost $25,000.

Chicago, Ill.—Architect J. E. O. Pridmore has just made drawings for remodeling large frame residence at Evanston for Mrs. Ward. The exterior will be entirely changed into the Colonial style; will put in new hardwood interior finish, plumbing, etc. For J. B. Sweatt, at Western Springs, he has just finished plans for a frame residence to have hardwood finish, laundry, furnace and all improvements. He is also working on drawings for a large block of four-story and basement stores, flats, large hall and office to be built on Forty-third street. Mr. Pridmore will move in April to 123-5 La Salle street, where he has engaged a suite of offices on the eighth floor. He will still keep his south side office for the convenience of his south side clients.

Architect Clinton J. Warren: For E. A. Bacheldor, of the Southern Hotel, a ten-story hotel 161 by 125 feet; to cost $400,000. It will be erected on the northeast corner of Twenty-second street and Michigan avenue, the first story will be of stone and above of pressed brick. It will be handsomely finished in hardwoods, marble and tile work, be of steel construction and thoroughly fire-proof, have three elevators, steam heat, electric light and all the modern improvements. The Oxford office building, which was designed by Mr. Warren, will shortly be completed and he will occupy a handsome suite of offices on the top floor. They were planned specially for his use and will be fitted up in a very complete manner. He will probably move the beginning of April.

Architect H. B. Wheelock: For R. E. Evans a block of two-story stores and flats corner of Thirty-fifth and Wallace streets, size 50 by 100 feet, of pressed brick, stone, iron and glass; cost $15,000. For the same owner at Buena Park a two-story and basement residence to cost about $10,000; size 30 by 50, frame, stone basement, hardwood interior, hot water heating and all improvements. For W. J. Jefferson, at 175 Monroe street, alteration and two-story addition. Bedford stone, and iron, freight and passenger elevators, steam heat, electric light, marble and tile work, steel beams and columns, gravel roof; cost $20,000. Making plans for Dr. Franklin H. Martin on Lake Park avenue near Thirtieth court two three-story residences to cost $22,000. They will have Bedford stone fronts, hardwood interior finish, hot water heating and all the sanitary and modern improvements.

Architect William Strippelman: For D. V. Purington et al., an eight-story apartment hotel, 110 by 127 feet in size, to cost about $400,000. It will be built on the southeast corner of Michigan avenue and Thirty-fifth street. The front will be of Anderson pink buff pressed brick with stone and terra-cotta trimmings; the interior will be elaborately finished with marble and tile work, electric light, steam heat and the very best of sanitary arrangements. It will be of steel construction and thoroughly fire-proof. For Kohl & Middleton he is making plans for a theater to seat seven hundred people; also for remodeling present building. For M. Clarkson, on Michigan avenue and Forty-ninth street, one two-story residence and one two-story flat building, to cost $14,000. They will have stone fronts, hardwood interiors, furnaces and all the sanitary improvements. For G. F. Gabbitt, a three-story and basement store and flat building, 46 by 70 feet in size, to cost $16,000; to be erected corner of Madison street and Albany avenue. It will have a buff Bedford stone front and all the modern conveniences. For John Ault, on Calumet avenue near Forty-seventh street, a two-story and basement buff Bedford stone front residence, to have hardwood finish, furnace, etc., and cost $8,000. For Mr. Mickel, on South Halsted street near Eighteenth street, remodeling building into stores and flats. For the Union Glass Company, corner of Butler and Thirty-eighth streets, a one-story warehouse of wood and corrugated iron; size 110 by 140 feet. For the Fulton Street Wholesale Company, a one-story addition of pressed brick and stone; size 80 by 252 feet; corner of Fulton and Peoria streets.

Architect D. H. Burnham: For the Columbian Vault Company at 120 Dearborn street, a sixteen-story office building of brown brick and brown terra-cotta front; size 84 by 90 feet; cost $350,000. Making plans.

Architect G. W. Maher: For C. S. Johnson, a three-story and basement flat building, to have Connecticut brown stone front, all sanitary improvements and cost $15,000. For J. J. Bryant at Riverside, a two-story basement and attic frame residence, hardwood finish, furnace, etc.

Architect Wesley A. Arnold: For F. P. Elliott, a two-story basement and attic residence, frame, stone basement, hardwood finish, hot water heating, etc.; cost $12,000; to be erected at Oak Park. For John Q. Anderson, at Council Bluffs, a two-story basement and attic residence, 34 by 72 feet, of hardwood interior, furnace, etc.; to cost $8,000. For F. P. Friedenhausen, on Clark street, remodeling; to cost $6.000.

Architect Henry Sierks: For Kirtz Brothers and Buhrer, a two-story foundry and additional story to old building.

Architects Burnham & Root: For Colonel John Hay, at Cleveland, Ohio, an eight-story office building; to be fire-proof, have steam heat, marble and tile work, electric light, pressed brick and terra-cotta front and cost $200,000. Plans are completed and bids all in.

Architect H. B. Seely: For Judge Galbraith, of Erie, Pennsylvania, remodeling building northeast corner of Madison and Franklin; steam heat, electric light, marble and tile work, steel columns, etc.; cost $50,000. He is also making plans for a four-story apartment house of pressed brick, stone and copper front, hardwood finish, hot water heating, etc., to be erected on Vernon avenue and cost $30,000.

Architect Oliver W. Marble: For Barry Brothers, five Bedford stone front houses, 105 feet front, on Forty-first street and Grand boulevard: to have hardwood finish, slate mansard, steam heat and all improvements, and cost $60,000. For same owners, on Grand boulevard and Forty-third street, two Bedford stone front houses; to have steam heat and all improvements, and cost $25,000.

Architect Louis Martens: For Hopkins & McKillup, a block of four three-story residences, of Bedford stone fronts, copper bays, hot water heating, etc.; to cost $30,000. For J. Rose, at 4308 Wabash avenue, a three-story flat building; to cost $10,000. For George Axel, on Wells street near Chicago avenue, a four-story apartment building, 34 by 100 feet; to cost about $20,000.

Architect Oscar Cobb: Making plans for remodeling the Ninth Street Theater at Kansas City; he will build a new stage, new auditorium with chairs to accommodate 2,500 people, put in steam heat, electric light, and make it into a first-class modern theater. He also made drawings for remodeling the opera house at Rockford, Illinois; he will put in new boxes, gallery, addition to the rear, steam heat, electric light, etc.; at a cost of $20,000.

Architects Raeder, Coffin & Crocker: For Fraser & Chalmers, at Twelfth and Rockwell streets, manufacturers of mining machinery, twelve buildings; to cost about $300,000. For the Grant Locomotive Company, on Robinson avenue between Twelfth and Sixteenth streets, Cicero, a complete plant for the manufacture of locomotives; the buildings will cover about thirty-three acres.

Architects Frederick K. Bauman and J. K. Cady: For E. P. Baker, a six-story cold storage warehouse, on Michigan street just east of State; pressed brick and stone front, electric light, etc.; cost $25,000. They are also preparing plans for a handsome two-story basement and attic residence; to cost $20,000; to be erected at Sheboygan, Wisconsin.

Architects Robbins & Charpie: For Harry R. Wysor, at Muncie, Indiana, a three-story business block and opera house, to seat fifteen hundred persons; pressed brick and stone front.

Architect J. M. Van Osdel & Co.: For Thomas Eckardt, a three-story apartment house, on Hampden Place; to have a Portage brown stone front, furnace heat, and cost $24,000.

Architect George H. Boise: For August Semmeling, at Blue Island, a two-story store and flat building. For H. L. Spangenberg, at Ravenswood, a two-story frame residence. For Miles H. Carr, at Cuyler, a frame dwelling to cost $4,000. For George Lomax, at Fox Lake, a summer cottage. He is also working on drawings for a four-story apartment house to have pressed brick and stone front, steam heat, etc.; to cost $20,000.

Architect A. G. Ferree: For J. Swartwout, on Sixty-ninth street, Englewood, a three-story store and flat building, to have two fronts of Bedford stone, electric and gas lighting, freight elevator, furnaces and all improvements, and cost about $50,000.

Architects Crowen & Richards: For T. V. Day, on Clark street, near Van Buren, a four-story theater, size 50 by 100 feet, of pressed brick and stone front, and have accommodation for eighteen hundred people. They will put in electric light, steam heat and all improvements; the cost will be about $100,000.

Architect J. C. Zarbell: For W. C. Ritchie, on the southwest corner of Green and Van Buren, a six-story factory, 150 by 118 feet, of pressed brick and stone front, have steam heat, elevators, etc., and cost $75,000. For Arnold Bros., on the northeast corner of Randolph and Union, a seven-story warehouse,

38 by 156 feet, of Anderson pressed brick and terra-cotta front, steam heat, elevators, electric light; cost $50,000. For Carl Curtis, on Clark street, south of Chicago avenue, a four-story store and flat building, 40 by 100 feet, of Anderson brick and iron front, steam heat, etc., to cost $25,000.

Architect J. J. Edgar: For Ishpeming, Michigan, a Catholic church, 110 by 50 feet in size, of stone all round and slate roof, in the Gothic style of architecture, to cost $25,000. For C. Netcher, at 77 and 79 Madison street, two additional stories, to cost $15,000. For St. Jarlath's Catholic school, a three-story addition of pressed brick and stone; also three-story residence for the Sisters. For six-story warehouse and stables, 90 by 114 feet, to cost $65,000, to be built on State, near Fifteenth street; pressed brick and Bedford stone, steam heat, elevators, electric light, etc.

Architects Burling & Whitehouse: For Ryerson Estate, on Water street, between Fifth avenue and Franklin street, a four-story store, 50 by 80 feet, of pressed brick and stone, to cost $20,000.

Architects J. F. & J. P. Doerr are making plans for a six-story hotel, 66 by 94 feet, of Bedford stone front, to be erected in Hyde Park and cost $50,000.

F. B. Marshall has prepared plans for the Ashland Club annex, to be erected corner of Washington boulevard and Wood street. It will be 58 by 84 feet and a basement, and two stories in height. In the basement will be the bowling alleys, buffet and kitchen, together with the steward's apartments, toilet rooms, etc. On the first floor will be the billiard hall accommodating twelve tables, and the banquet hall, seating 175 persons. The second floor will contain the ball-room, 56 by 82 feet. It will have a stage at one end and a balcony supported from the roof trusses at the other. Over the entrance will be the musicians' gallery. The building will be constructed of stone and brick, with terra-cotta trimmings, and be heated by steam. It will cost $25,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

The favorable indications for a busy season still continue. Never within the last five years in the opinion of, not only the writer, but of the profession, and trade also, such a prospective boom showed itself in the proportions of the one for this year. Architects are jubilant over the prospect of enjoying incomes never before realized, such as were mentioned in another journal a few months since. Tall stores will displace the atmosphere to the extent of eight and nine stories in height, while in the suburbs and on hill tops will be erected many truly beautiful residences. Cincinnati has the money to put into fine structures, but her people, until lately, have been satisfied in jingling the money from rents received from inferior tenements. Cincinnatians can be justly proud of their architects and builders, and they are beginning to appreciate their ability.

This list only partially tells the tale:

Architect James W. McLaughlin has drawn the plans for a magnificent stone mansion for Gen. A. T. Goshorn; materials, stone, slate roof, hardwood finish, mantels, furnace, plumbing, stained glass, and in fact all modern improvements; cost $35,000.

Architect W. W. Franklin reports: For Mr. Henry Barth, Cincinnati, a residence; materials, pressed brick, stone, slate roof, pine finish, stained glass, plumbing, gas, mantels, electric bells, etc.; cost $11,000.

Architect Theodore Richter, Jr., reports: For Mr. James Dalton, Price Hill, Cincinnati, two houses; materials, brick, slate roof, pine finish, plumbing, stained glass, etc.; cost $6,000.

Architect Louis Picket reports: For Mr. Leonard K. Beahr a store and flat building; materials, pressed brick, stone trimmings, elevator, iron work, hard-wood finish, tin roof, mantels, plumbing, etc.; cost $15,000. Also for the Catholic congregation at Madisonville, Ohio, a church edifice; cost $11,000.

Messrs. Hannaford & Sons report: For the First German M. E. Church, a church edifice; materials, pressed brick, slate roof, hardwood finish, etc. For James M. Glenn addition to the office building Fifth and Rose streets, Cincinnati, six stories high; materials, pressed brick, tin roof, elevators, pine finish, steam heat, mantels, etc. Also plans for the Holroy flower market. Materials: brick, glass front, slate roof, etc.

Also busy on the working plans for the new I. O. O. F. Temple. Ground will be broken in April.

Architect Adam J. Bast reports: For Mr. Henry Fischer, two houses; materials, pressed brick, pine finish, tin roof, iron mantels, etc.; cost $7,000.

Architect Jacob Rueckert reports: For St. John's German Protestant Church, Cincinnati, a parsonage; pressed brick, pine finish, blinds, stained glass, mantels, etc.; cost $6,000.

Architect Joseph G. Steinkamp reports: For Thomas Emery's Sons, a flat building; materials, pressed brick, furnace, tin roof; gas fixtures, mantels, plumbing; cost $10,000.

Architect L. B. Plympton reports: For James B. Daniels, Fifth and Race streets; materials, pressed brick, hardwood finish, slate roof, wood mantels, stained glass, plumbing, gas, etc.; cost $12,000.

Architects Crapsey & Brown report: Business good, the following being among the new plans being prepared by them: A large opera house and Masonic Temple, to cost $25,000, at Richmond, Kentucky; materials, brick, tin roof, furnace heat, scenery, chairs, iron work, pine finish. At Georgetown, Kentucky, the Baptist congregation will build a handsome brick church, with slate roof, pine finish, etc.; cost $15,000.

Architects Des Jardins & Hayward are engaged on the plans for an addition to Miss Bauer's Conservatory of Music; size 52 by 88 feet, five stories high; materials, brick, terra-cotta, stone, tin roof, pine finish, etc.; cost $15,000.

Besides the plans above named, are several for houses costing from $2,000 to $4,000.

Cleveland, Ohio.—Architect A. Koehler: For H. H. Reves, a four-story dwelling, stone and frame; size 34 by 63 feet; cost $6,000; J. F. Gill, builder.

Architect W. H. Dunn: For the Board of Education, three three-story school buildings; size 76 by 32 feet, 76 by 110 feet and 76 by 32 feet respectively; brick and stone, at a cost of $54,000, $65,000 and $54,000.

Architect W. P. Rice: For the Cleveland League Base Ball Association, grand stand; size 90 by 40 feet, to cost $5,000; M. Moore, builder.

Mr. J. A. Lannett will erect a two-story residence; size 40 by 53 feet; stone and frame; cost $4,000.

Three hundred permits issued during February; $407,946.

Detroit, Mich.—Architects A. C. Varney & Co.: For Bernard Wilds, a block of four three-story brick residences, stone trimmings, slate and tar roof, size 75 by 64 feet, furnace heated; cost $140,000. Also for E. G. Brewer, Marshall, Michigan, a two-story brick residence, stone trimmings, slate roof, cost $5,000.

Architect Peter Dedcricks: For Thomas Zoltowsky, a two-story brick brewery on Hastings street; size 55 by 44 feet; cost $10,000. For Messrs. Ekhard & Becker, additions to brewery of brick with stone trimmings, size 40 by 50 feet; cost $10,000. For Conrad Clippert, at Debray, Michigan, three two-story brick stores and flats; cost $8,000. For Henry W. Rickel, a double residence block on Montcalm street; pressed brick and artificial stone trimmings; cost $8,000.

Architect H. J. Rill, who has moved into his new office rooms, 49 and 50 Buhl Block: For Our Lady of Help Roman Catholic Church, additions to school on Elmwood avenue; three stories, brick, at a cost of $10,000.

Architect Joseph E. Mills: For L. M. Brackett, at Rochester, Indiana, a two-story frame residence; cost $5,000.

Architects Malcombson & Higginbotham: For the Central Church of Christ, rebuilding church burnt about a month ago, at a cost of $250,000. For Lennam Brothers, a saloon building; pressed brick with stone trimmings, at a cost of $10,000. For William A. Pungs, a three-story brick residence on Park street with cut stone trimmings, to cost $6,500. For Mrs. Agnes Inglis, a two-story brick residence on Garfield avenue; to cost $5,000.

Architects Hess & Raseman: For the Detroit Gas Light Company, additions and alterations to building on Congress street; pressed brick and cut stone trimming; to cost $10,000.

Architect George W. Meyer: For William Huston, a two-story residence on Congress street; cost $6,500.

Architects Mason & Rice are preparing plans for Scripp Brothers for an eight-story office building to be occupied by the Detroit *Evening News*, *Tribune* and Dime Savings Bank, etc., to cost about $350,000.

Architects E. C. Van Leyen and J. A. Haskett: For Robert Cousin, a two-story double frame residence on Baltimore avenue; size 26 by 60 feet; to cost $5,000. For John Bilger, a three-story store and flat building on Grand River avenue; size 20 by 60 feet; cost $8,000. For George W. Chase, a three-story double brick residence; size 40 by 64 feet, slate roof; cost $9,000. For Mrs. E. J. Watkins, a two-story residence; size 28 by 50 feet; cost $5,000.

Kansas City, Mo.—Architect James Bannon: For Mrs. Mary Lick, brick dwelling, on Jefferson between Seventeenth and Eighteenth streets; cost $7,000. Also for Messrs. Oglebey & Jones, a brick store and office building bounded by Independence and Missouri avenues and Walnut street, 72 by 125 by 127 feet, seven stories; cost $125,000; all latest improvements. This building will contain 125 rooms, stairs, wainscoting and floors of marble; there will be a court in the center of the building 26 by 60 feet in size.

Architect J. J. Squire: For himself, brick business block at 1228 and 1230 Union avenue, 48 by 120 feet, two stories, all modern improvements; cost $14,000.

Architect H. J. Simms: For P. S. Giddy, brick apartment house at Twelfth and Jefferson streets, four stories, 84 by 120 feet; cost $65,000; all the latest modern improvements.

Architects' names not reported: For W. E. Minor, frame residence, 2504 Harrison street, 33 by 52 feet, two stories; cost $4,000. For J. A. Cosby, a brick residence, Twenty-eighth and Penn streets, 22 by 54 feet, one story; cost $2,500. For B. F. Dukes, brick business block at southwest corner Fifteenth and Olive streets, 22 by 60 feet, three stories; cost $2,500.

The Husted Investment Company of Kansas City, Kansas, will soon let a number of contracts for brick and frame residences in the suburbs of Kansas City, Kansas, and in Chelsea Park in particular. All information will be supplied by W. W. Woods, architect, Husted building, Kansas City, Kansas.

Little Rock, Ark.—Architects Rickon & Thompson have prepared plans for a slate factory for the Southern Slate and Lumber Company, to cost $25,000. For the Capital Street Railway, a new power house, to cost $25,000. For J. W. Taylor, at Pine Bluff, a residence, to cost $3,500.

Louisville, Ky.—Architects Clark & Lumas: For Mr. J. F. Krieger, a three-story residence, size 35 by 56 feet, on Third street; brick with stone trimmings, metal roof; cost $11,500. For Mr. James Badge, a two-story residence on Oak street near Second street; size 23 by 46 feet; brick with stone trimmings; cost $3,600.

Architects Drach & Thomas: For Mr. Ed. Kessler, a two-and-one-half-story residence on Jefferson street near Sixteenth street, brick; to cost $8,500. For Thomas Graff, a store and flat building, to cost $7,000. For Thomas Conrad, rebuilding residence on Broadway; cost $3,500.

Architects Maury & Dodd: For St. John's Episcopal Church, a brick and redstone church on Twelfth and Jefferson streets; seating capacity 500; slate roof; cost $18,000. For the congregation of the Presbyterian church, a stone and brick church and Sunday-school with class rooms; cost $30,000. For Miss Mary Lafin, a three-story brick residence, size 40 by 65 feet, slate roof, stone trimmings, to cost $14,000. For the Nelson County Commissioners, a brick and stone court house at Bardstown, Kentucky; size 65 by 70 feet, fireproof throughout; to cost $30,000. For George Newman, a three-story residence, size 39 by 60 feet, blue limestone front, slate roof; cost $13,000. For C. L. Robinson, a three-story brick and stone residence, size 35 by 70 feet, slate roof; cost $15,000. For Cabel Hall, a two-and-one-half-story brick and stone house, size 30 by 50 feet, slate roof; cost $7,500. For J. F. Bullett, Jr., at Big Stone Gap, Virginia, a two-story frame house, shingle roof; cost $5,000. For S. Carl Ashbrook, a three-story residence, brick and stone, slate roof; cost $14,000. For T. A. Lyons, a two-story brick residence and stone trimmings, size 30 by 40 feet, slate roof; cost $5,000. For the California Fig Syrup Company, a five-story brick building, size 65 by 65 feet, slow burning construction, asphalt roof; cost $18,000.

Meriden, Conn.—Architects Tolan & Riedel, of Fort Wayne, Indiana, have prepared plans for the Evangelical Lutheran Congregation for a brick and stone church to cost about $30,000. Contracts not let.

Minneapolis, Minn.—Atchitect H. G. Carter: For Mr. L. Hayes a five-story block of stores; cost $25,000.

Architect C. F. Struck: For Mr. Erick Lund, a three-story apartment house, brick and stone; cost $25,000.

Architect F. A. Clark: For Messrs. Peterson & Lofgren, a three-story apartment house; cost $20,000.

Milwaukee, Wis.—Architects H. C. Koch & Co. are preparing plans for the new government building subject to the approval of the supervising architect's office. The building will cost about $2,000,000.

The Builders' and Traders' Exchange have organized a distinct company to push their new building project ahead which they expect to put up this year.

Architect F. Velguth: For Mr. H. G. Tess a two-story business block; cost $9,000.

Architects Ferry & Clas: For Mr. Frank Beals, a two-story brick residence; cost $10,500. For Mr. A. C. Zinn, an $18,000 residence. For the Unitarian Congregation, a $30,000 church.

Omaha, Neb.—The Omaha Club will erect a large new club house at a cost of about $100,000. Work to be begun at once.

Pittsburgh, Pa.—Architect George S. Orth has prepared plans for the Memorial Public Hospital at Johnstown, Pennsylvania. The building will be of brick and stone; cost $50,000.

Architect Fred Sauer is preparing plans for a residence for Mr. Oswald Werner, stone and two stories, with all modern conveniences.

Architect Charles Bickel: For Messrs. Davis & Watson a four-story flat building.

St. Paul, Minn.—Architect A. H. Haas has prepared plans for a three-story store and office building 25 by 100 feet; cost $20,000.

Architect John H. Coxhead: For Prof. D. F. Colville, a residence, Colonial style, hardwood finish, mahogany, sycamore, birdseye maple and oak; cost $10,000. For Mr. Brand, at Highwood, Minnesota, a $5,000 residence; also a college building for the Northwest German Conference, at Charles City, Iowa; pressed brick, white stone trimmings; cost $30,000.

St. Louis, Mo.—Plans are being prepared for a monastery and academy building. It is to be of brick, four stories, and to cost about $150,000.

J. T. Lowergan is erecting a one-story brick kindergarten; cost $5,000.

Miss S. Stephen will erect this spring a two-story flat building, brick; cost $6,500.

Mr. E. Gemeide will build a $11,000 brick church; contractor, J. H. Remmers.

Mr. L. A. Bowlin will erect a two-story brick dwelling on Ewing avenue, at a cost of $7,000.

Salt Lake City, Utah.—Architects Thompson & Weigh: For O. L. Davis, the Teluride block; cost $50,000.

Architect M. Monheim: For A. B. Alexander, three stores; cost $25,000. For E. M. Briggs, business block; cost $50,000.

Architects Carroll & Keru: For the Jennings Estate, remodeling storehouses; cost $20,000. For Warm Springs Improvement Company, remodeling sanitarium, with all latest improvements in baths, etc.; cost $25,000. For J. S. Brexen, residence, brick and stone; cost $10,000.

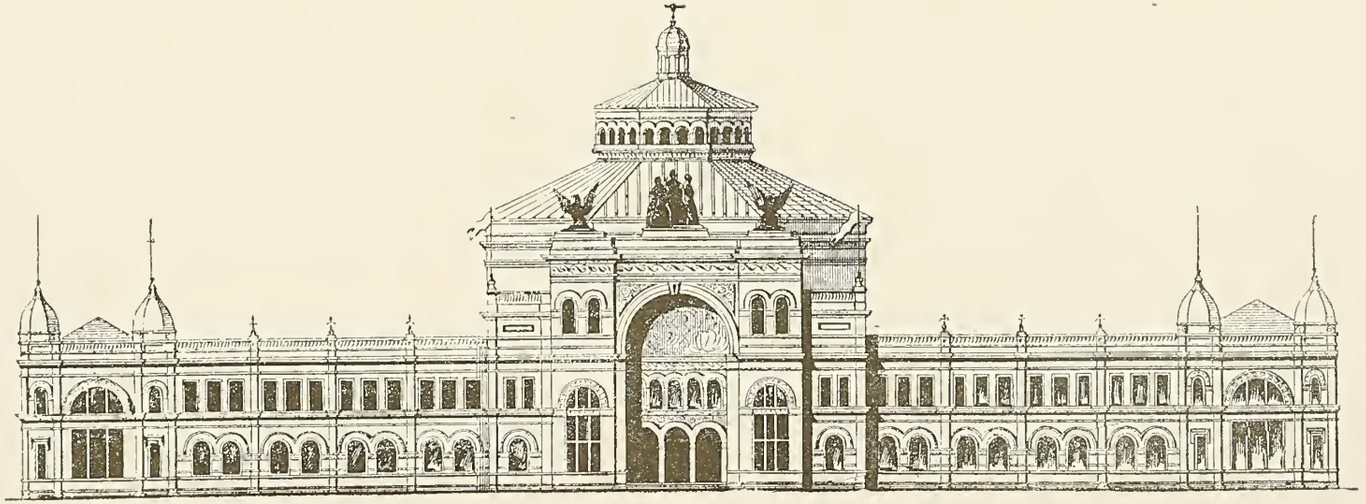
Architect R. Kletting: For N. W. Clayton, residence, pressed brick and stone; cost $14,000. For L. Mathews, American Fork, Utah, residence; cost $5,000. For B. Mathews, Provo, Utah, two residences; cost $8,000. For G. L. Dusenburry, Provo, Utah, residence; cost $6,000. For R. Kletting, residence, pressed brick and stone; cost $6,500.

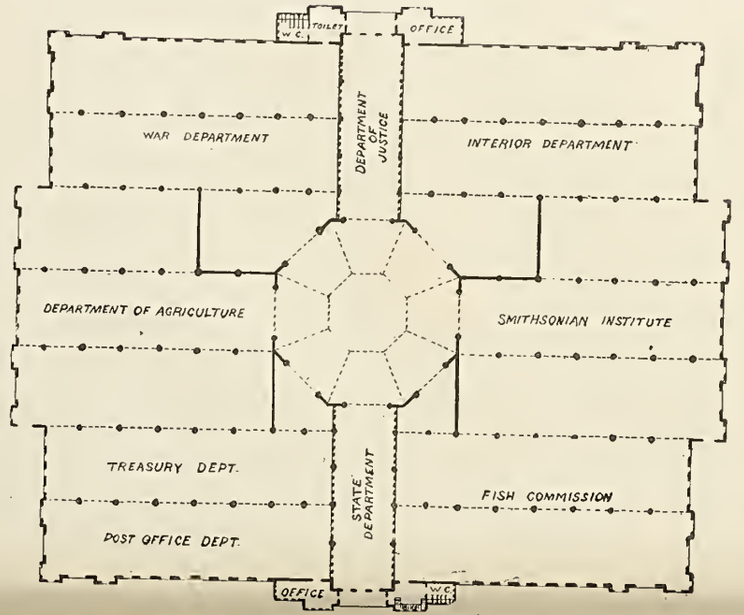
Architect F. A. Hale: For Mr. Davis, residence, pressed brick and stone, complete with all modern improvements; cost $14,000.

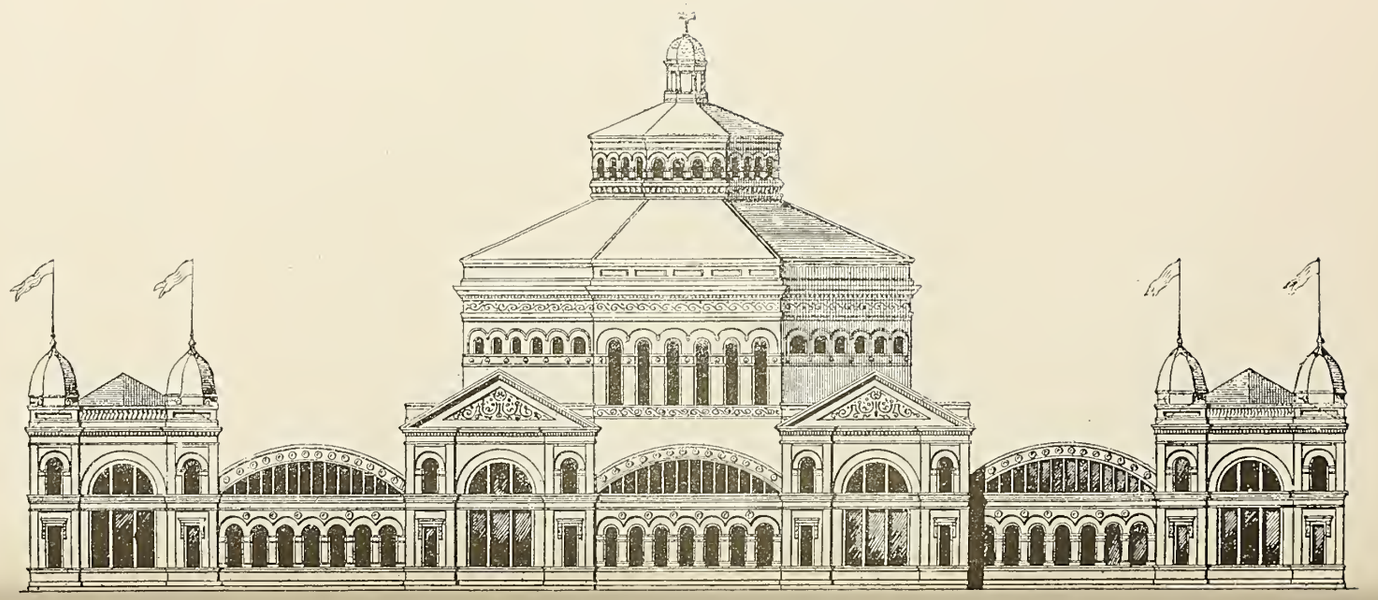
Architects Dallas & Hedges: For A. B. Brooks, store and office building, with all modern improvements; cost $45,000.

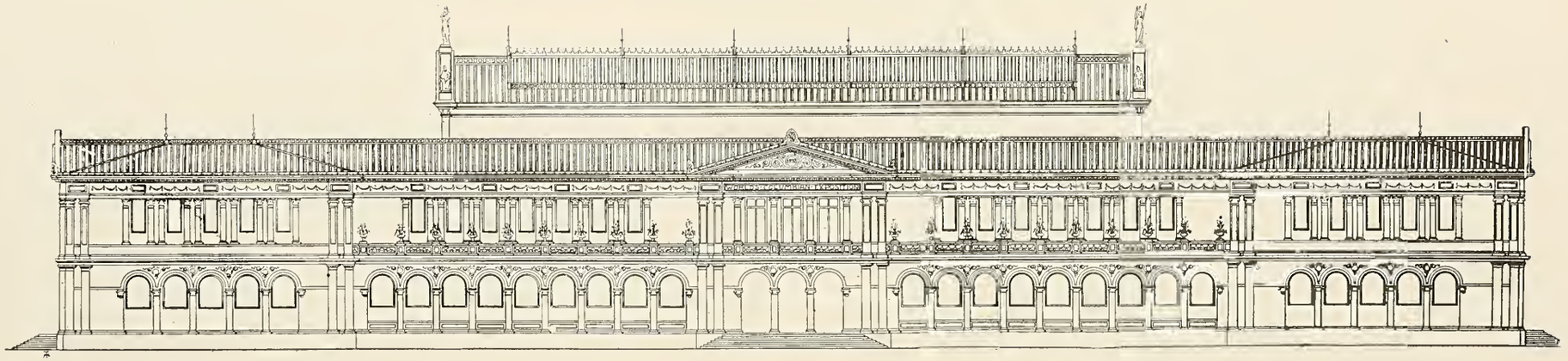
Architect Keiler: For B. C. Burke, four stores, brick and stone; cost $40,000.

Owing to the uncertain weather little work has been done for the past two months, but there are evidences of "genial spring" now, and building materials are again beginning to line the streets. Although great improvements have been made here within the past year in the matter of facilities for building operations, there yet remains a number of items required in building not represented, and which would find a good field here.



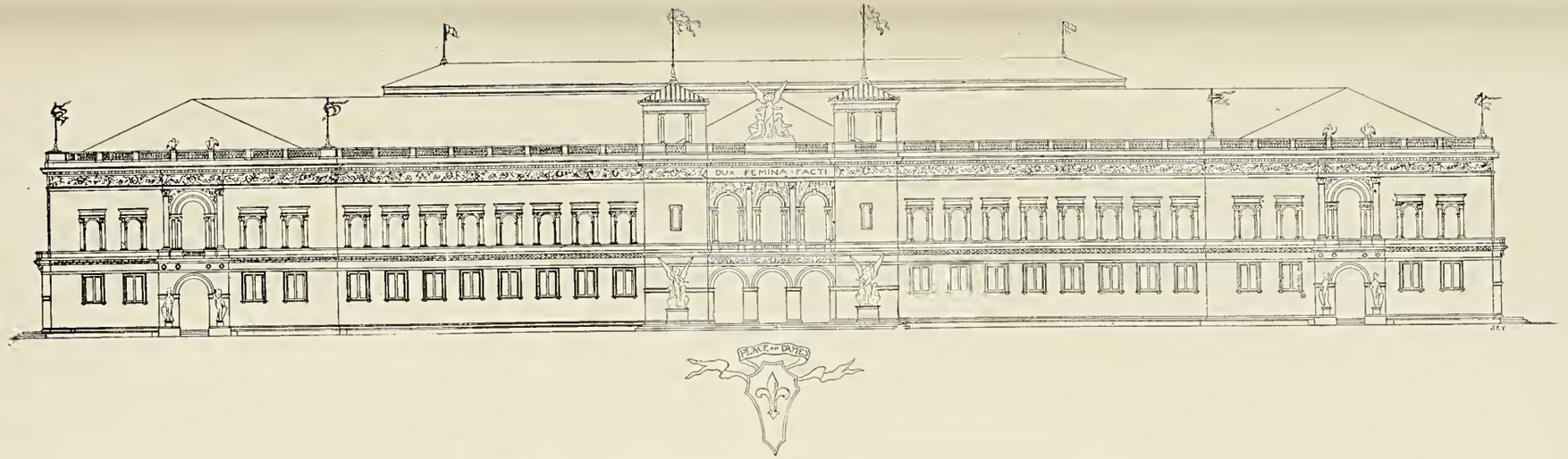

TOILET
W.C.
OFFICE
WAR DEPARTMENT
DEPARTMENT OF JUSTICE
INTERIOR DEPARTMENT
DEPARTMENT OF AGRICULTURE
SMITHSONIAN INSTITUTE
TREASURY DEPT.
STATE DEPARTMENT
FISH COMMISSION
POST OFFICE DEPT.
OFFICE
W.C.





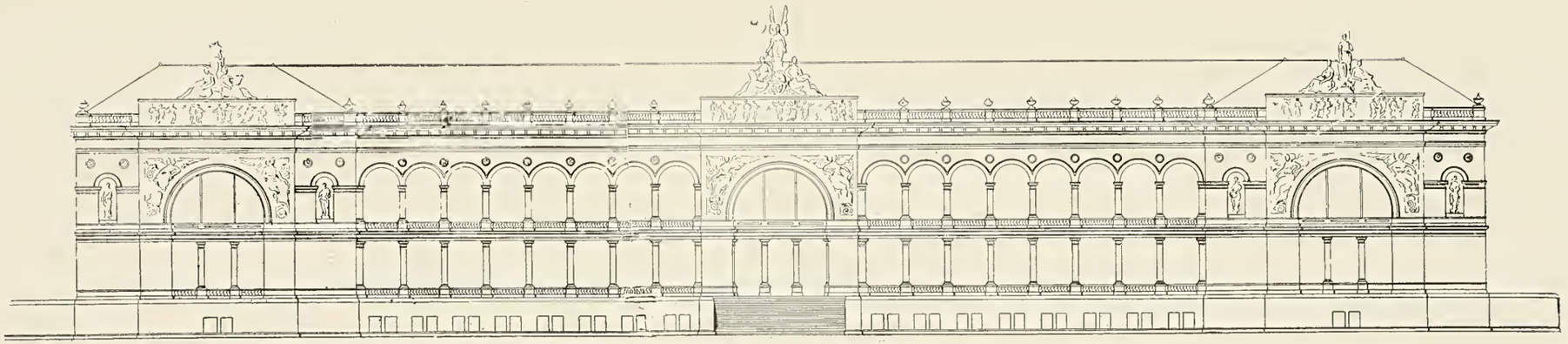
- FIRST PRIZE DESIGN FOR WOMAN'S BUILDING - WORLDS COLUMBIAN EXPOSITION

SOPHIA G. MAYDEAN, ARCHITECT -



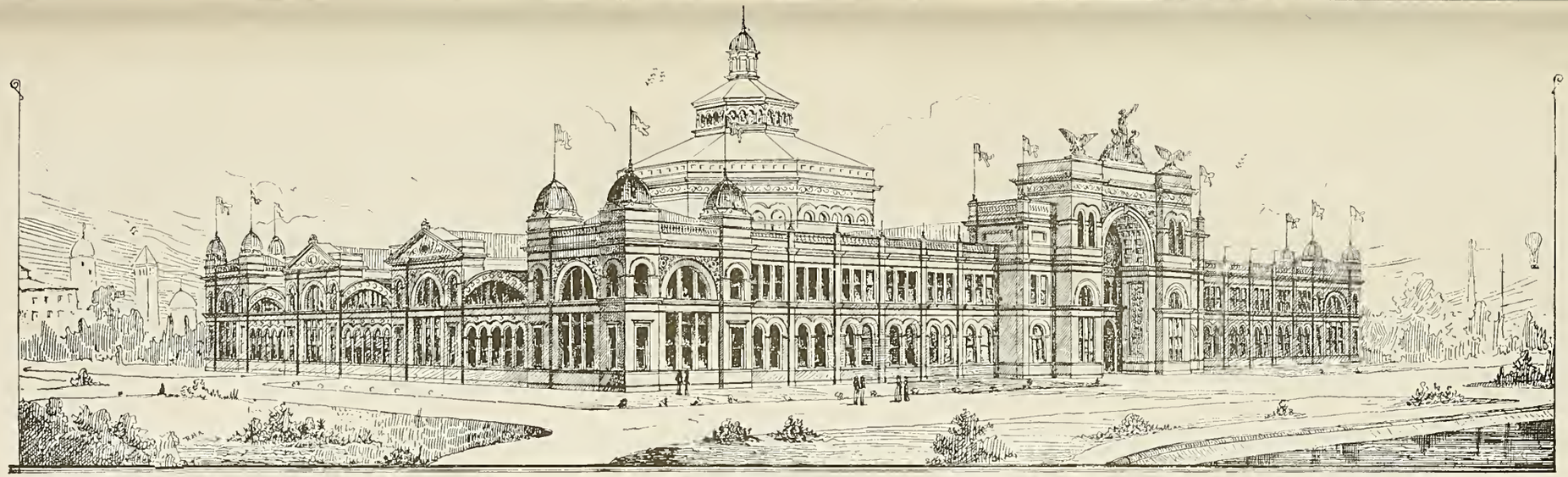
SECOND PRIZE. DESIGN FOR WOMANS BUILDING - WORLD'S COLUMBIAN EXPOSITION -

LOUIS L. HOWE JR - ARCHITECT -



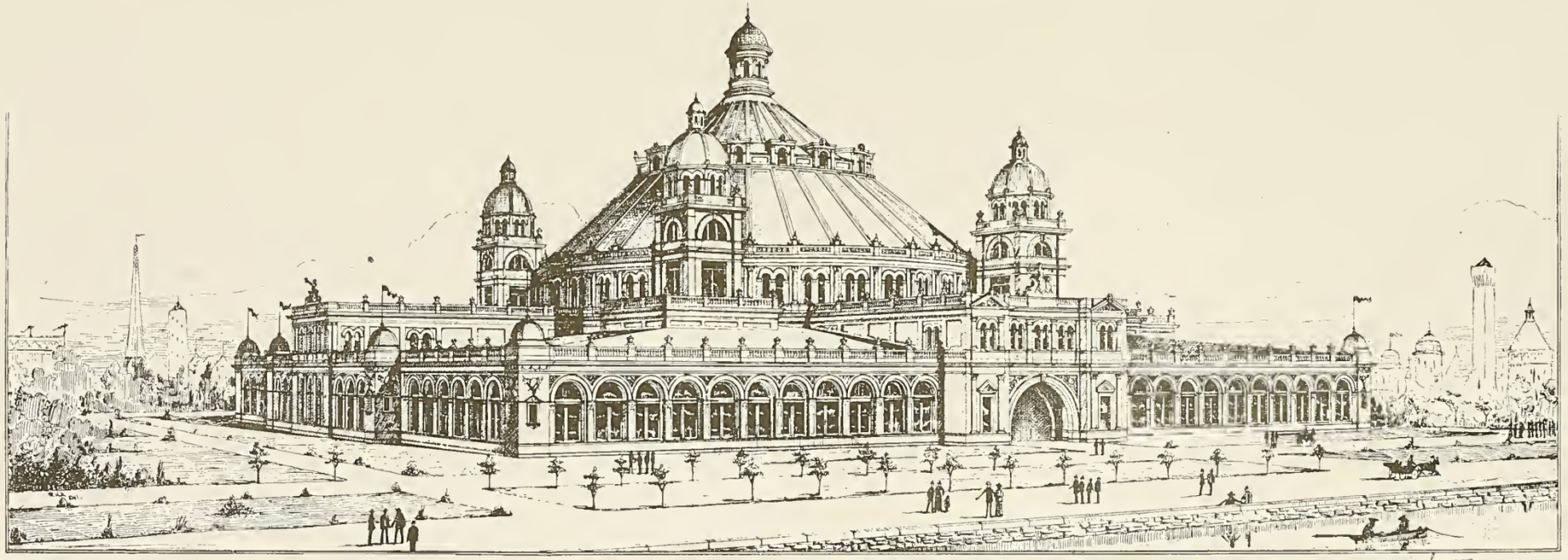
- THIRD PRIZE DESIGN | FOR WOMAN'S BUILDING - WORLDS COLUMBIAN EXPOSITION -

LAURA MAYES ARCHITECT -



SKETCH FOR
U.S. GOVERNMENT BUILDING
WORLD'S COLUMBIAN EXPOSITION

Jas H Windrim
SUPERVISING ARCHITECT,
TREASURY DEPT.

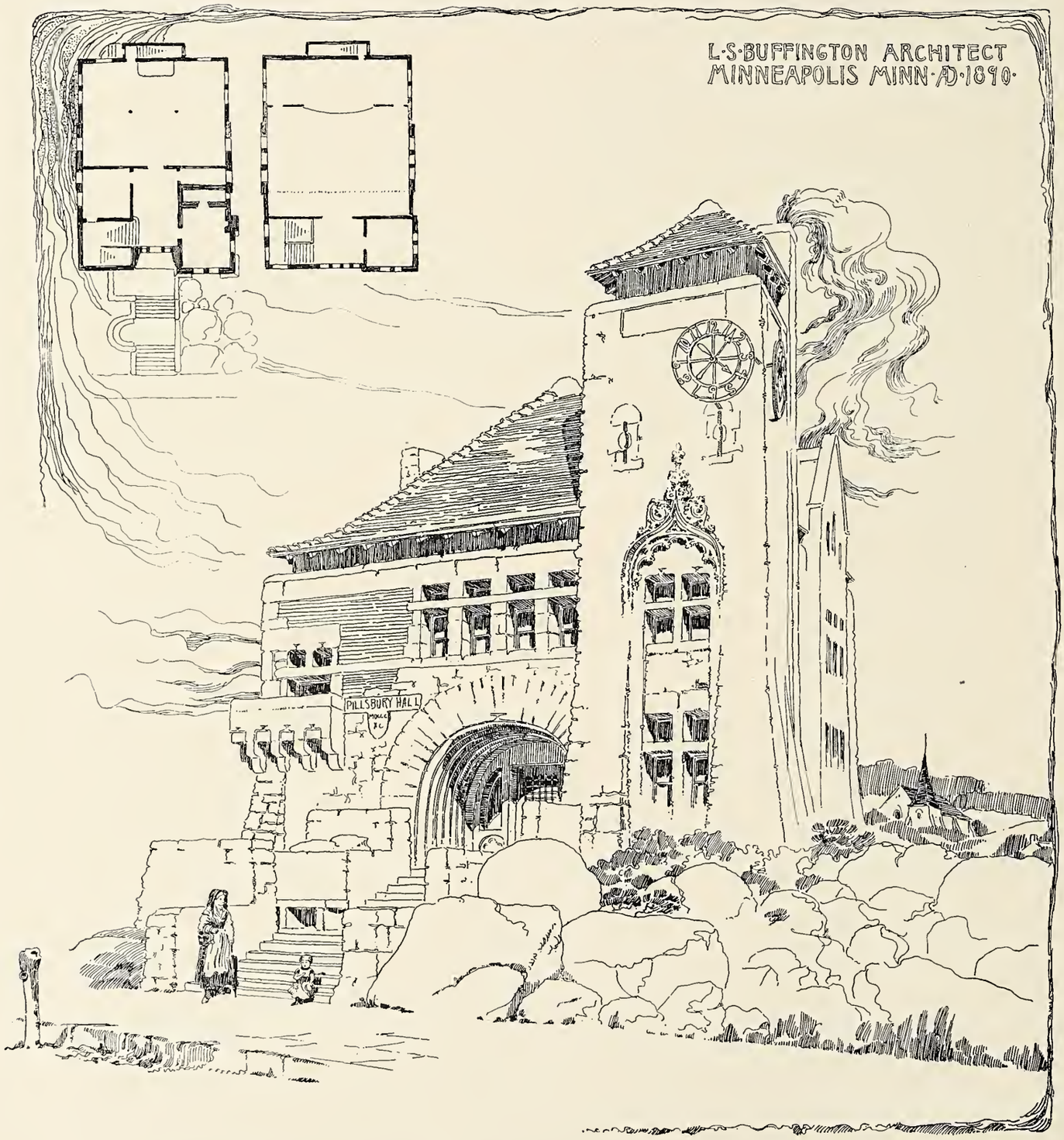


ALTERNATE SKETCH
FOR
U.S. GOVERNMENT BUILDING
WORLD'S COLUMBIAN EXPOSITION.

Supervising Architect.
TREASURY DEPARTMENT.

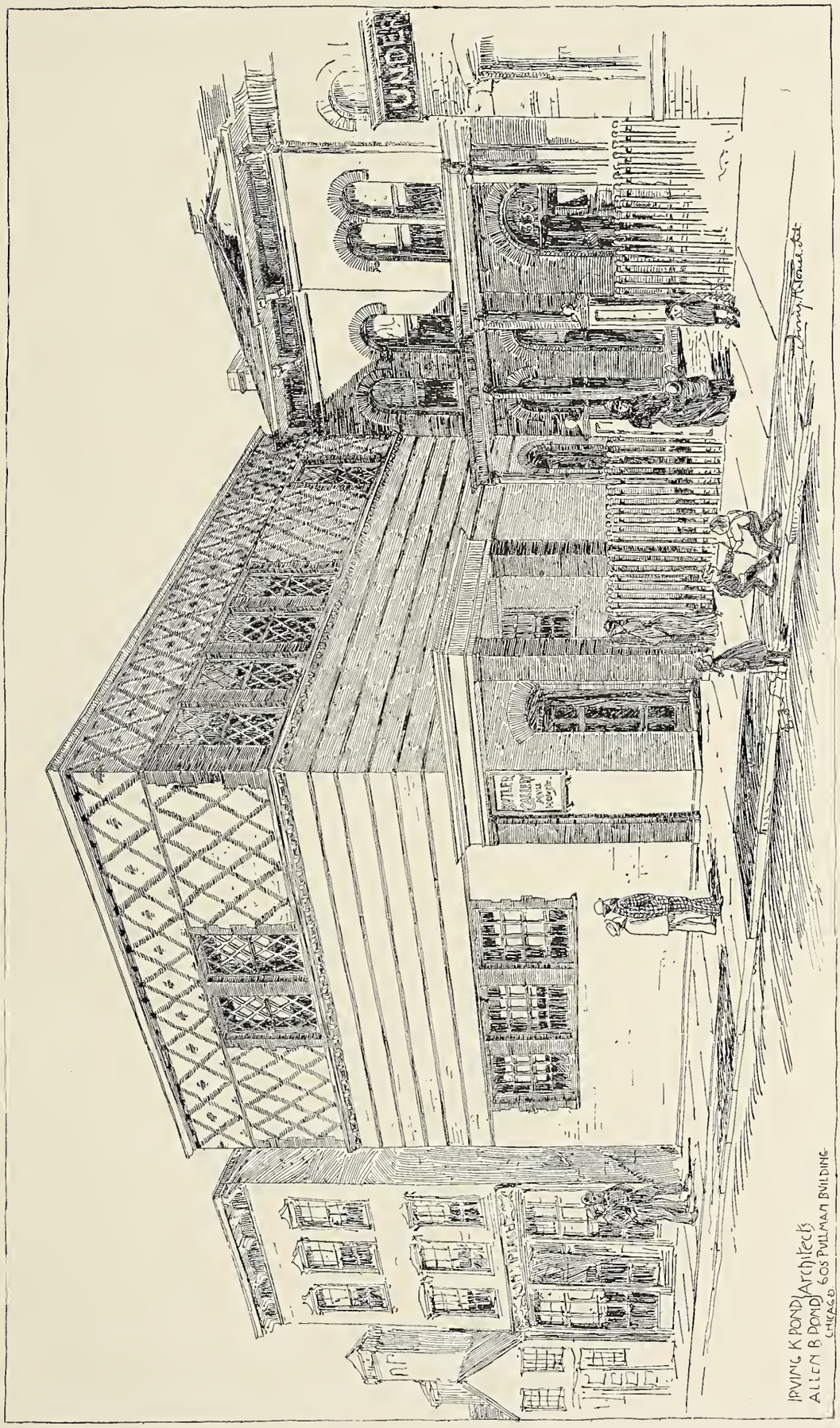
GROVELAND APARTMENT BUILDING, FOR HOWARD & BERWIN, CHICAGO.

JOHN DUNCAN, ARCHITECT.



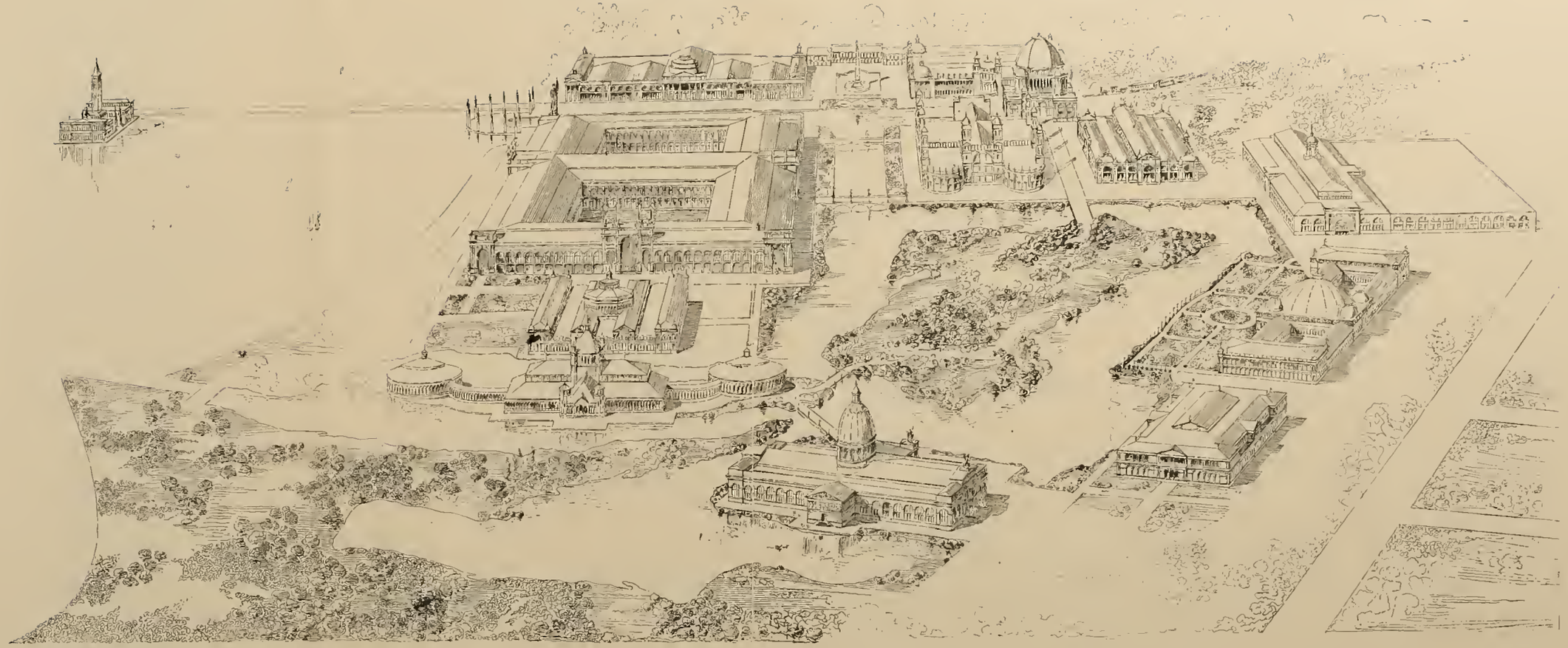
PILLSBURY MEMORIAL TOWN HALL, SUTTON, NEW HAMPSHIRE.

L. S. BUFFINGTON, ARCHITECT, MINNEAPOLIS, MINNESOTA.



BUTLER GALLERY AND READING ROOM, CHICAGO.

POND & POND, ARCHITECTS.



BIRD'S-EYE VIEW OF THE WORLD'S COLUMBIAN EXPOSITION, SHOWING DESIGNS AND GROUPING OF ALL BUILDINGS NOW DETERMINED UPON.—DEPARTMENT OF CONSTRUCTION, APRIL, 1891.—VIEW LOOKING SOUTH.

Casino and Pier.

Agriculture.
Manufactures and Decorative Arts.
United States Government Building.
Fisheries.

Illinois State Building.

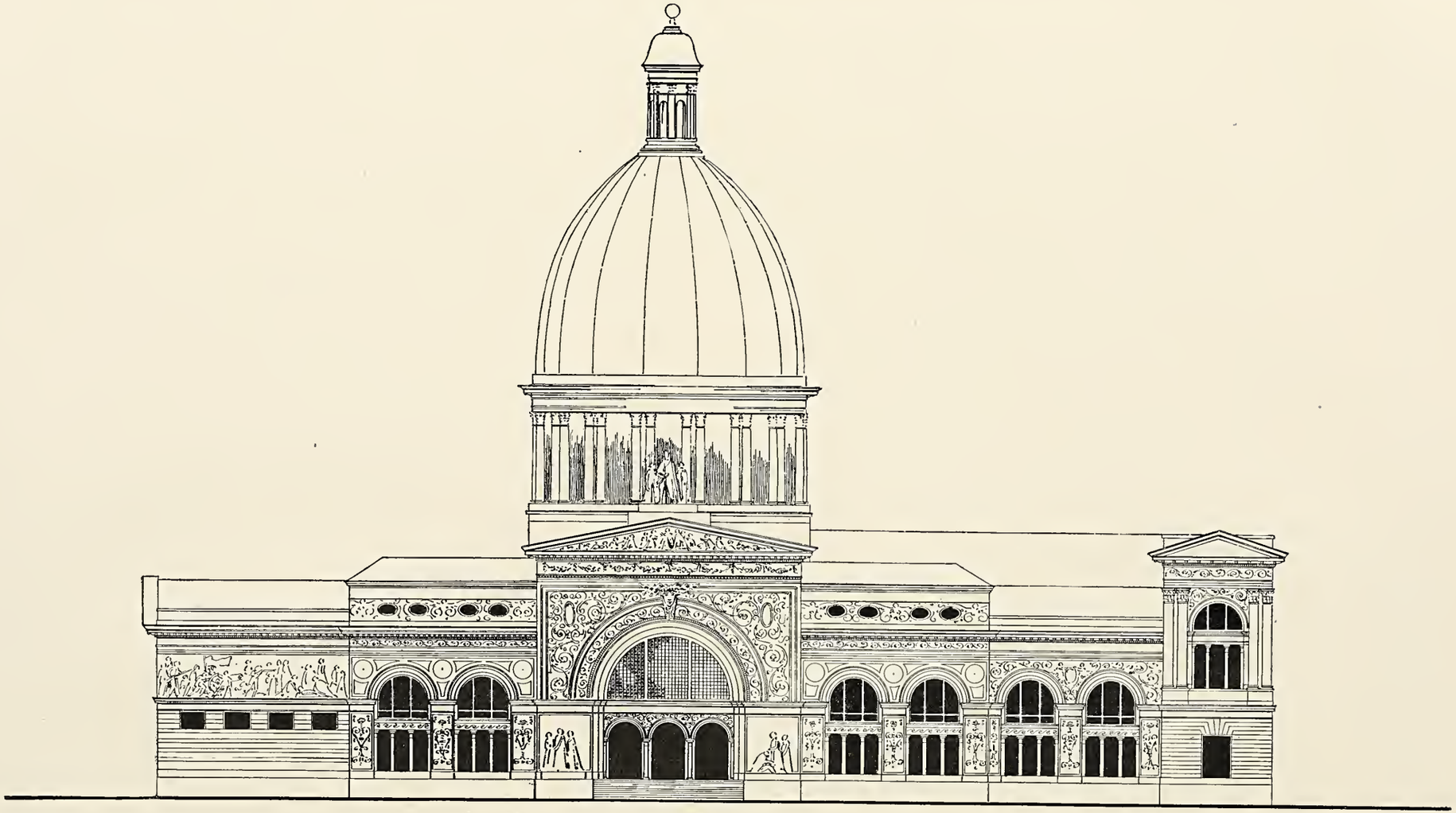
Machinery Hall.
Administration Building.
Electricity.

Mines.
Woman's Building.

Horticulture.

Transportation.

INLAND ARCHITECT PRESS, CHICAGO



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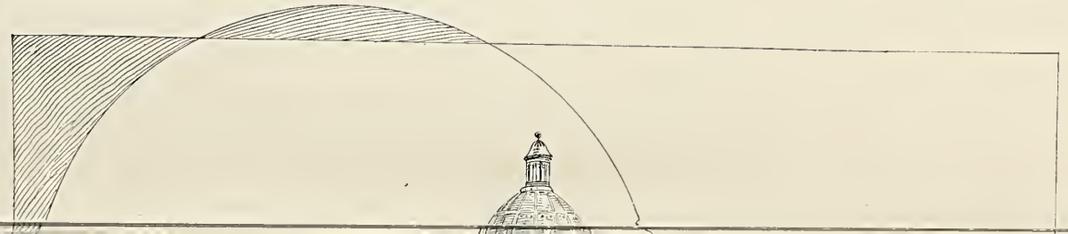
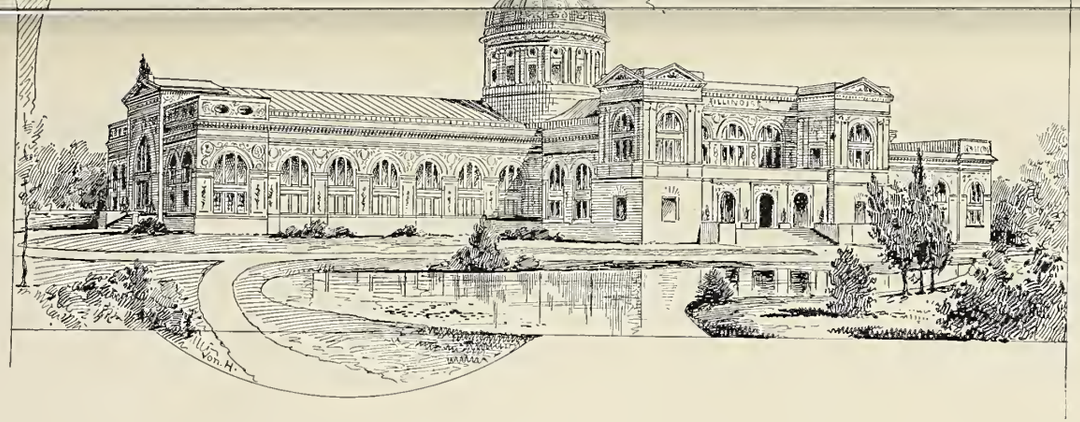
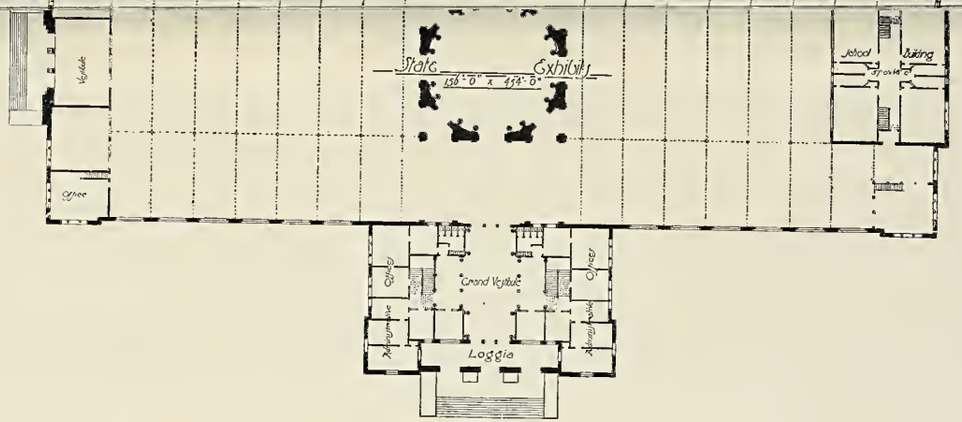
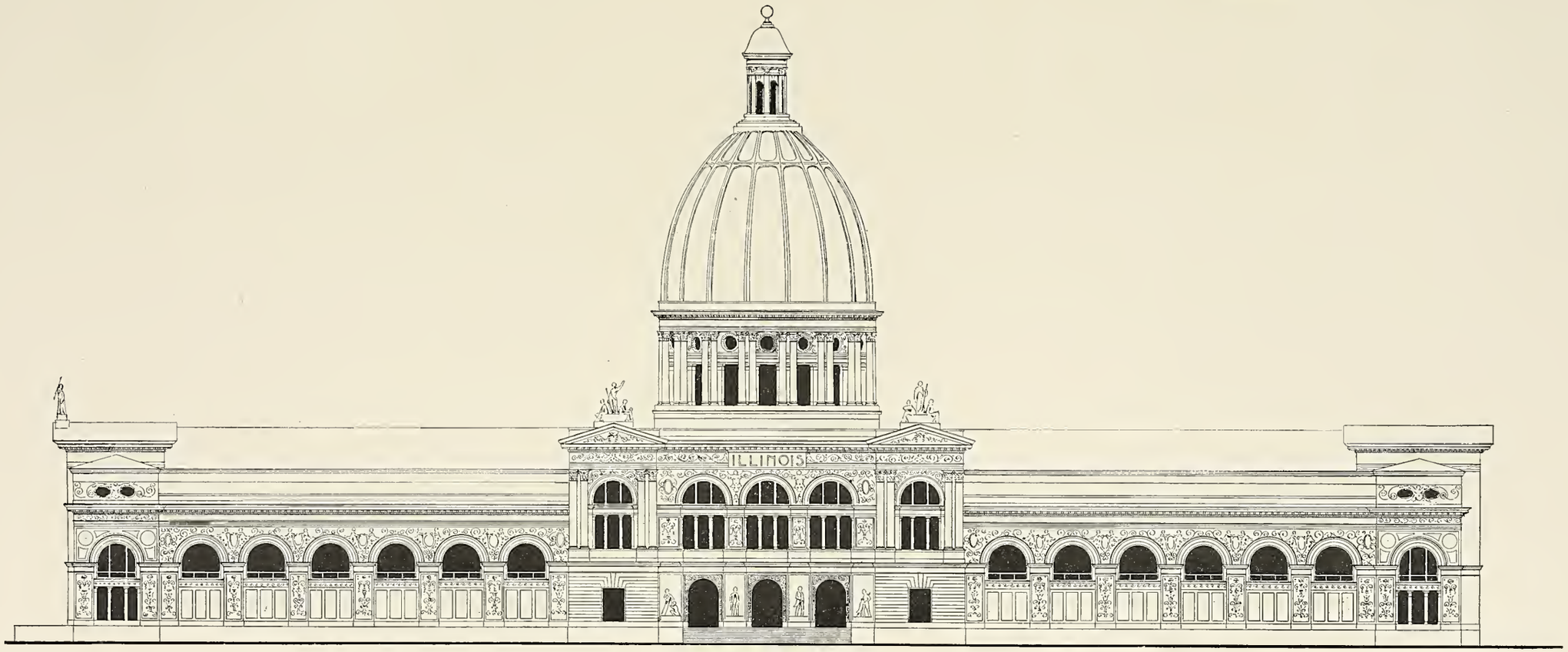


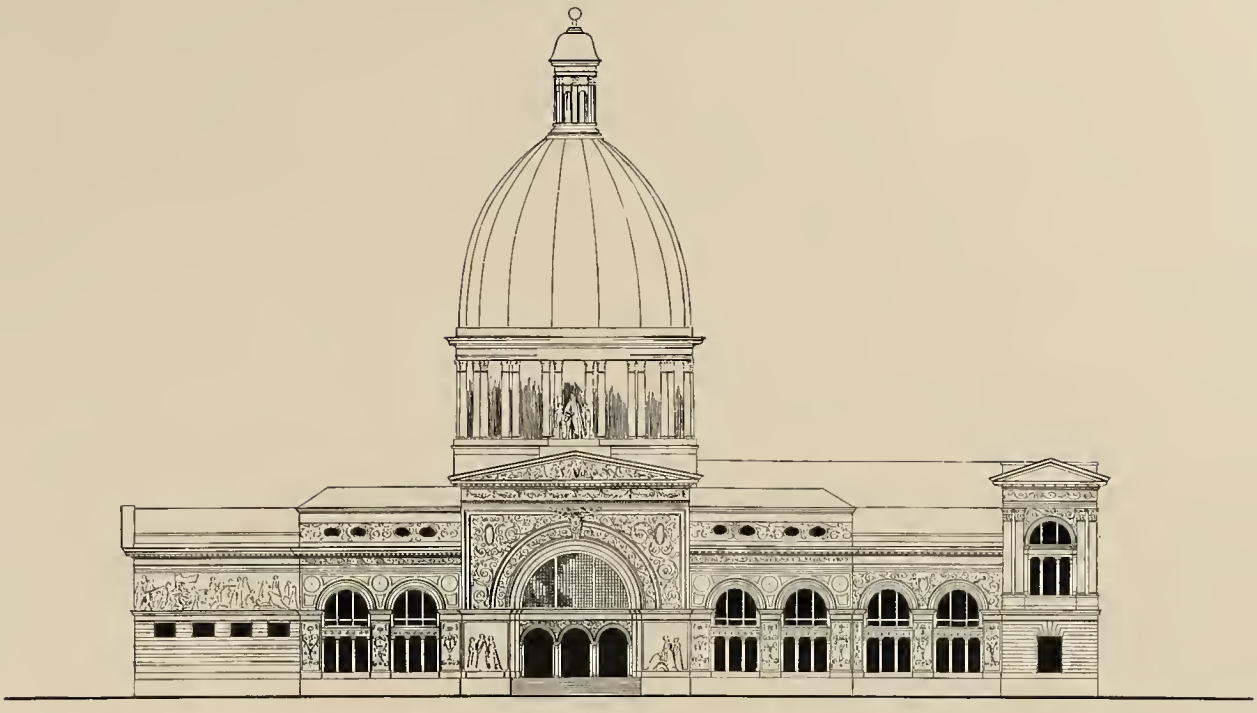






DESIGN OF ILLINOIS STATE BUILDING, COLUMBIAN WORLD'S FAIR, CHICAGO.

W. W. Boyington & Co., Architects.



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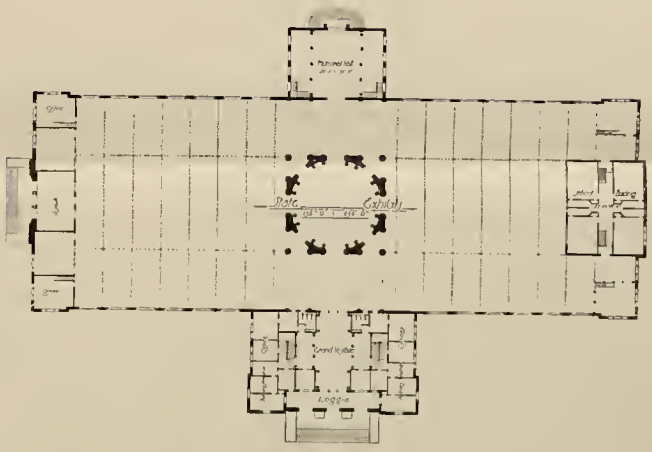
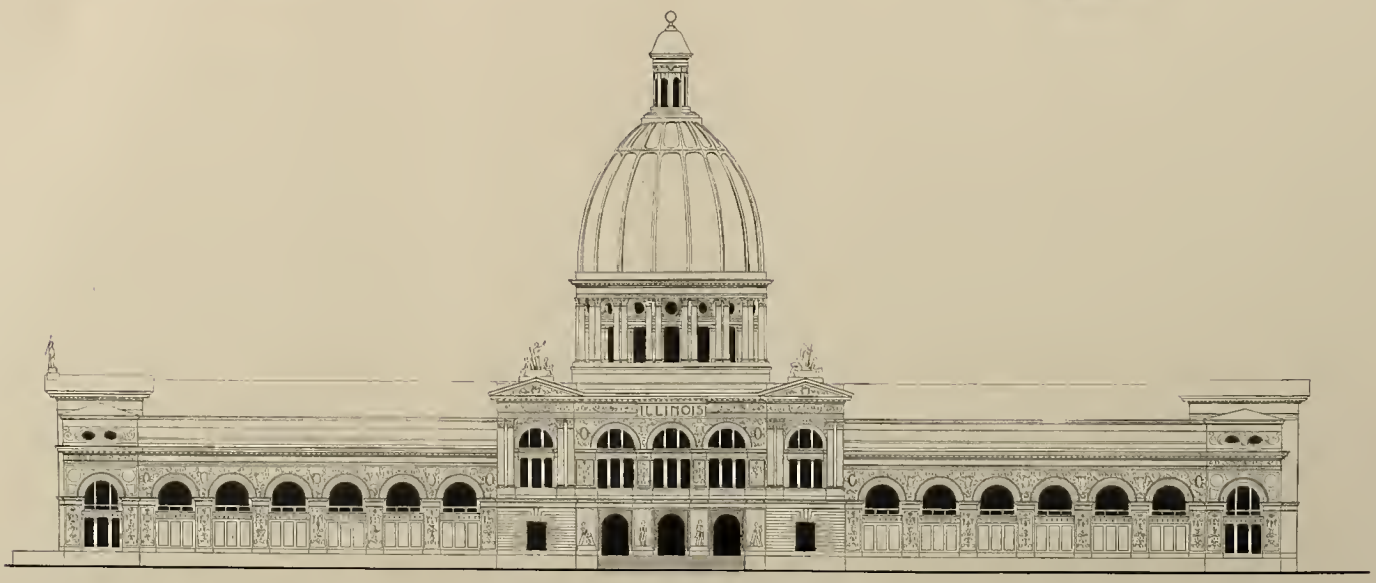


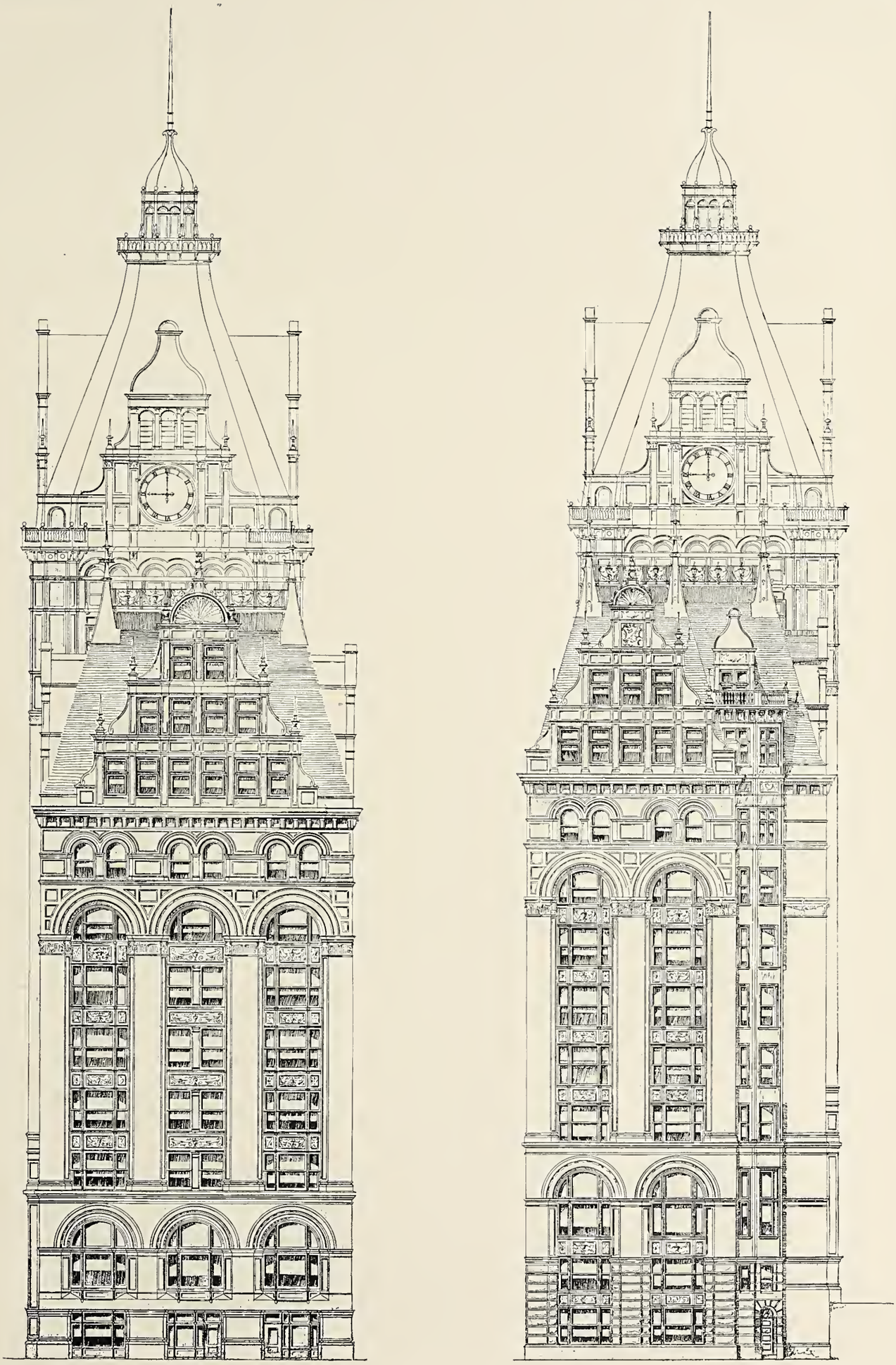


DESIGN OF ILLINOIS STATE BUILDING, COLUMBIAN WORLD'S FAIR, CHICAGO.

W. W. BOYINGTON & CO., ARCHITECTS

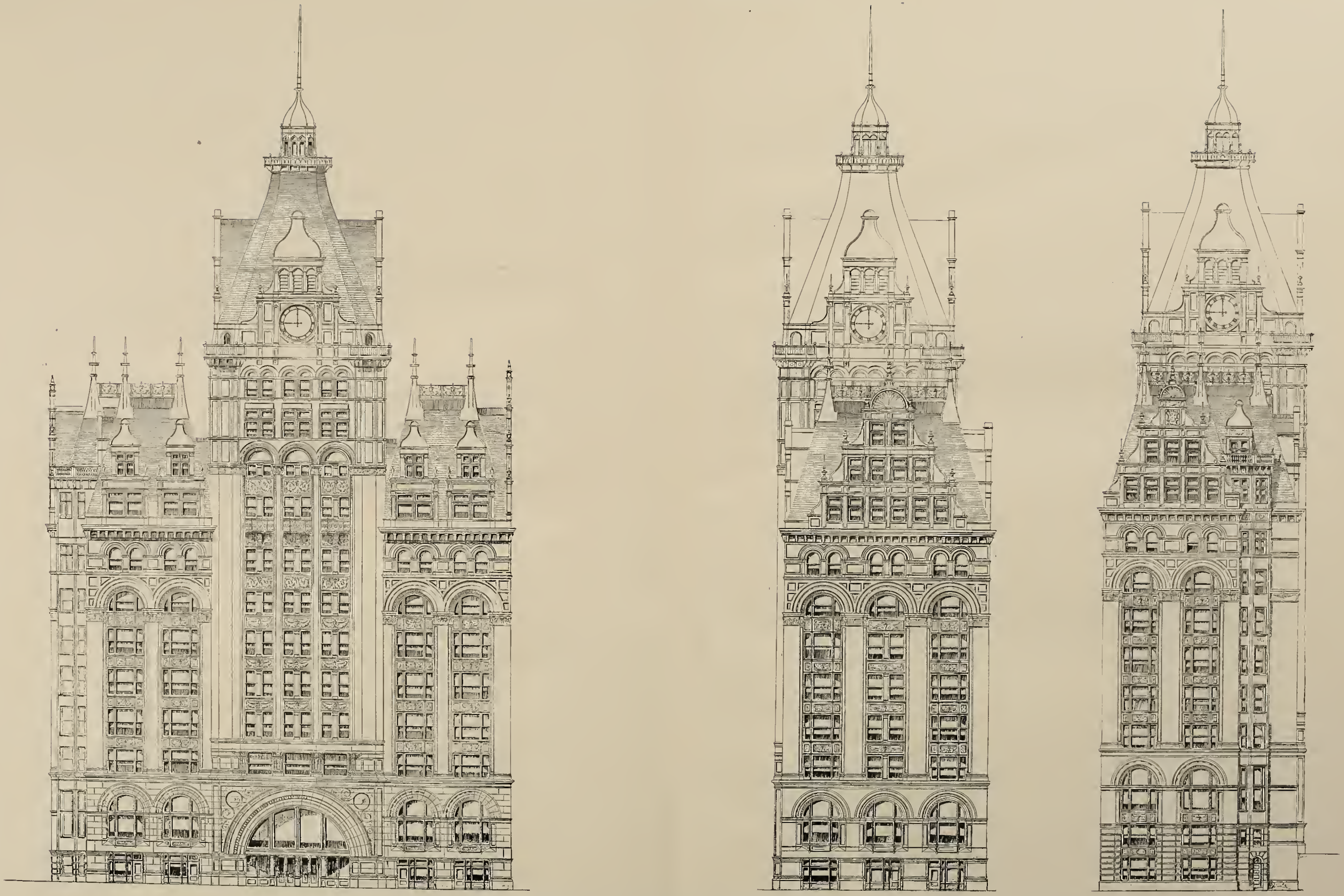
ELEVATIONS OF ACCEPTED DESIGN, COMPETITION FOR OF

S. S. BEMAN,



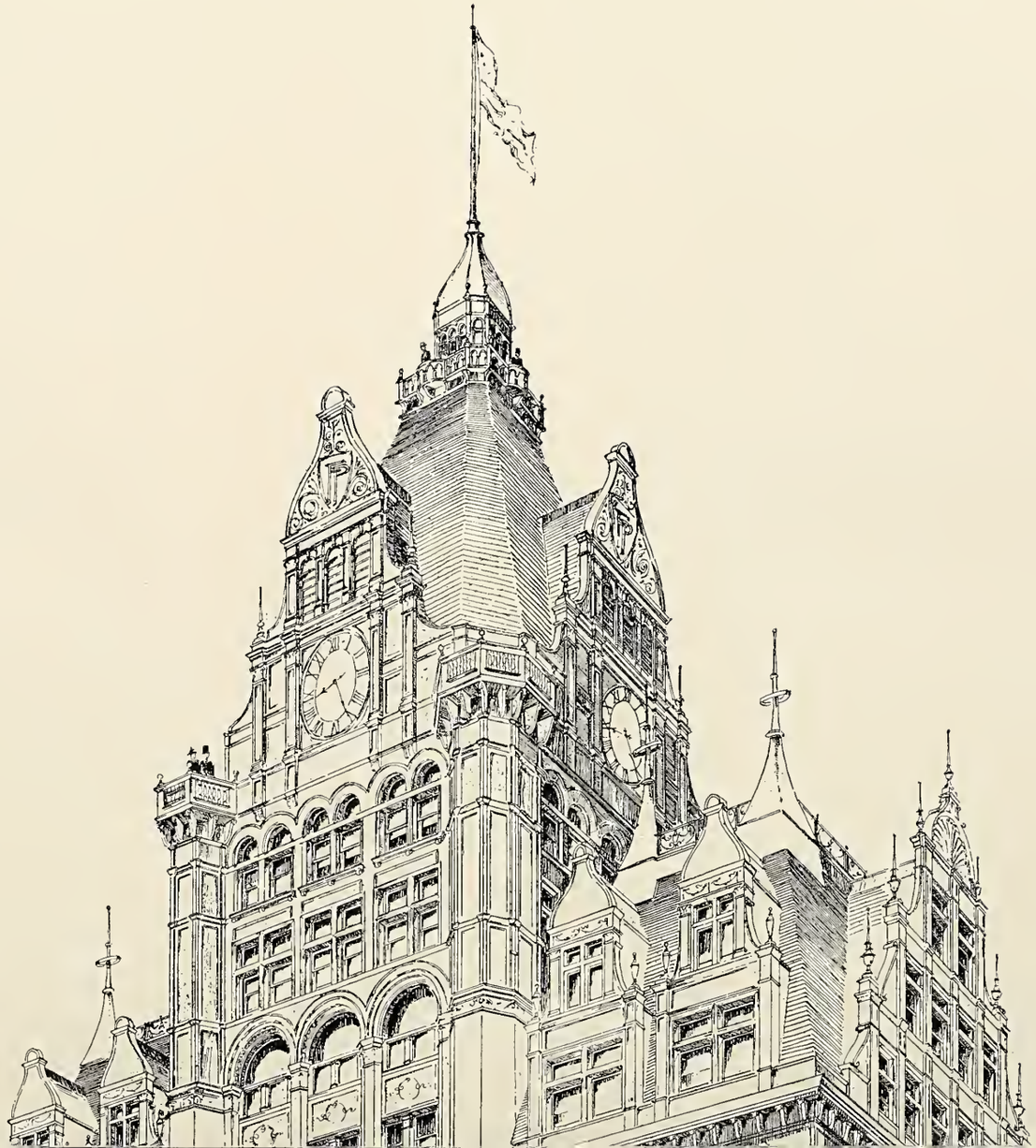
ICE BUILDING FOR FRED. PABST, MILWAUKEE, WISCONSIN.

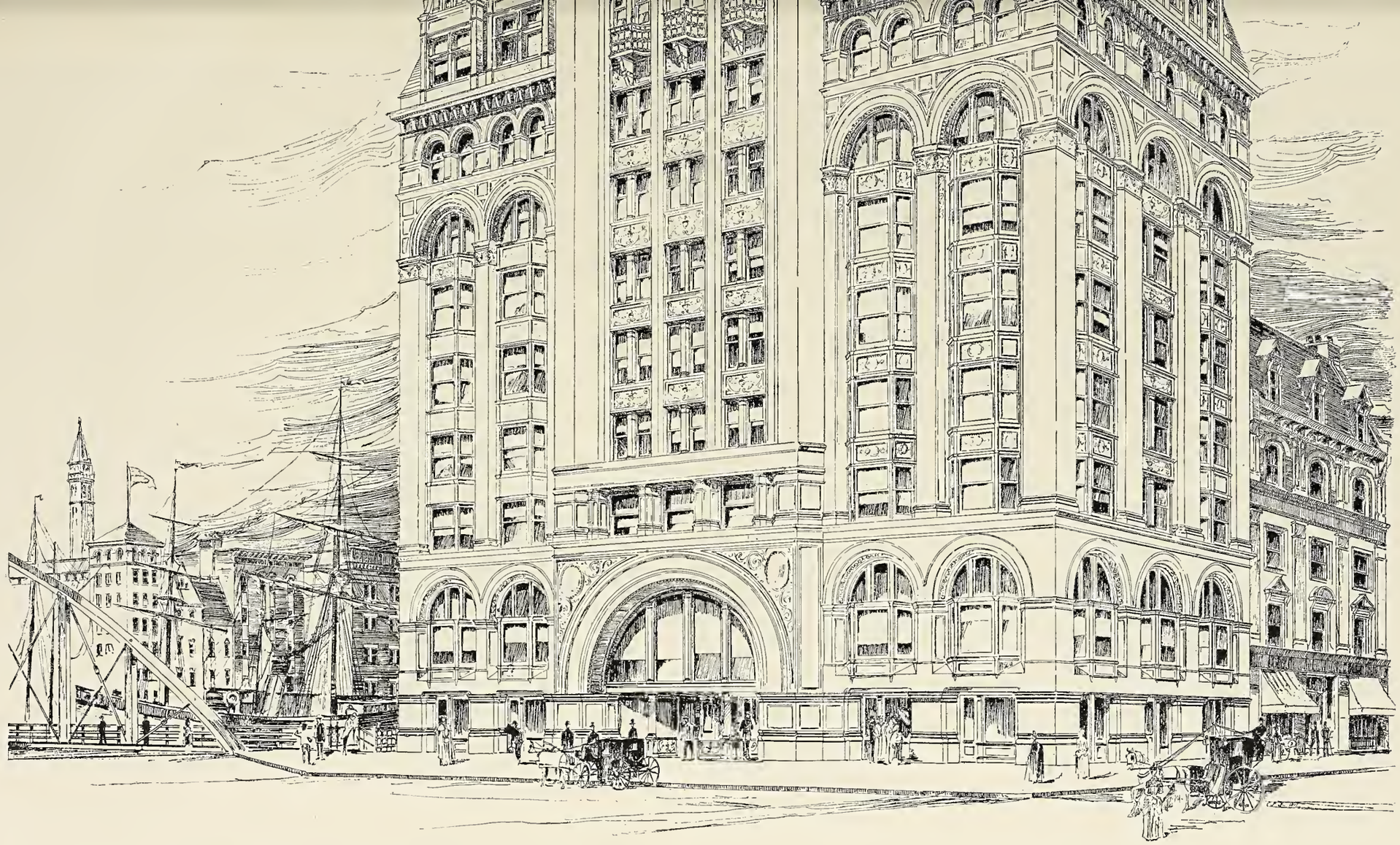
HITECT, CHICAGO.



ELEVATIONS OF ACCEPTED DESIGN, COMPETITION FOR OFFICE BUILDING FOR FRED. PABST, MILWAUKEE, WISCONSIN.

S. S. BEMAN, ARCHITECT, CHICAGO.





ACCEPTED DESIGN, COMPETITION FOR OFFICE BUILDING FOR FRED. PABST, MILWAUKEE, WISCONSIN.

S. S. Beman, Architect, Chicago.

ACCEPTED DESIGN, COMPETITION FOR OFFICE BUILDING FOR FRED. PABST, MILWAUKEE, WISCONSIN.

S. S. BEMAN, ARCHITECT, CHICAGO.

THE INLAND ARCHITECT AND NEWS RECORD

Vol. XVII. APRIL, 1891. No. 3

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Committee on Code of Professional Ethics: Louis H. Sullivan, chairman, Chicago, Ill.; E. H. Kendall, New York, N. Y.; W. W. Carlin, Buffalo, N. Y.; Henry Van Brunt, Kansas City, Mo.; R. W. Gibson, New York, N. Y.

Committee on Clerk of Works: R. W. Gibson, chairman, New York, N. Y.; D. Adler, Chicago, Ill.; W. G. Preston, Boston, Mass.; J. W. McLaughlin, Cincinnati, Ohio; J. G. Cutler, Rochester, N. Y.

Committee on Uniform Contract: O. P. Hatfield, chairman, New York, N. Y.; D. Adler, Chicago, Ill.; Alfred Stone, Providence, R. I.

Committee upon Conservation of Public Buildings: The presidents of Chapters.

Death of Herbert C. Burdett, of Buffalo.

On April 10, at 11 o'clock A.M., there died at Buffalo a young architect of exceptional ability and great promise—Mr. Herbert C. Burdett, junior member of the firm of Marling & Burdett. He was born in Boston in 1855, and after graduation at Harvard his business career opened with the architects Hartwell & Richardson, of Boston, after which he was engaged with H. H. Richardson for a number of years, after which he came to Buffalo in 1887 and entered into a partnership with J. Herbert Marling, that continued up to the time of his death. His illness was brief, death resulting from heart disease and pneumonia. Mr. Burdett never was a robust man, suffering much ill health. He had a keen appreciation for art, and was fond of music, and was a good pianist. In this as in all the habits of his life he was methodical, painstaking, proceeding with care to a knowledge of the principles and groundwork of his subject. His characteristics were perseverance, enthusiasm, generosity and modesty, and such a man cannot fail to leave on dying a wide circle of sorrowing friends. At a special meeting of the Buffalo Architectural Sketch Club, of which Mr. Burdett was a member, the following resolution was drawn:

WHEREAS, We, the members of the B. A. S. C., being informed of the sudden death of our friend, Herbert C. Burdett, be it

Resolved, That we express our sincere regrets and condolence to his family in this great bereavement, in the loss of our friend and adviser.

Among the buildings in Buffalo designed by the firm are the Saturn Club House, the Hammond house, the William Hamlin and the Jewett M. Richmond residences, and others among the finest buildings in the city.

Lightning-rod Protection from Lightning.

In the minds of many laymen there has long been a suspicion that the lightning rods in common use do not protect the buildings to which they are attached; and in the minds of many electrical experts this shrewd suspicion has amounted to a certainty. Mr. M. D. C. Hodges, the editor of *Science*, convinced of the inutility if not of the absolute harmfulness of the ordinary rods, has devised a new method of protecting buildings from damage by lightning. In an article in the issue of *Science* for March 6, Mr. Hodges sets forth his argument which in brief is as follows: The electrical energy which is converted into what is called a discharge of lightning exists prior to the discharge, not in the earth, nor in the cloud, but in a column of air extending from the earth to the cloud. When a discharge takes place, electricity does not pass, as the common phrase puts it, from earth to cloud nor from cloud to earth; but electrical energy stored up in the atmosphere flows in from all sides to a point, or better, to a line of air, at which such energy is converted into heat. This display of energy is greatest upon the surface of a conductor which chances to lie within this column of dielectric. Now if this conducting material, for example the ordinary form of lightning rod, is of such mass that it is not consumed easily by the discharge, damage is done to the building to which it is attached; whereas, if the conductor can be consumed by the discharge, the heat into which the energy is converted is expended in the consumption of the conducting material and no damage is done to the building, just as insignificant damage is done by the

discharge of unconfined powder. Franklin cites an instance in which the energy, which destroyed the spire and shattered the lower portion of a church, spent itself harmlessly in the upper part of the church in the destruction of a single slender wire. It will be noted that the argument of Mr. Hodges takes issue with the current theory in several particulars. It is commonly held that, just as a point will draw a store of electric energy without a discharge whereas a blunt surface in the same circumstances will cause a discharge, so the pointed common lightning rod will draw this store of energy from the atmosphere, or permit it to pass to the atmosphere, by gradual conduction along the line of least resistance, provided the ground connection of the lightning rod be perfect. This theory finds the defect of the common rod in the large mass of metal with a comparatively small surface and deficient ground connections, and asserts that an iron tower with ample earth connections at its base will not be "struck by lightning." In case of practical application of Mr. Hodges' method, the wire must be replaced after being consumed and no protection is afforded in the interim ; and secondly is it not conceivable that the amount of energy in a particular column of dielectric may be sufficient to consume a slender wire or group of wires and leave a residuum unexpended to do damage to the building? Doubtless Mr. Hodges has taken account of these objections. Experiment under the actual conditions of ordinary building will be required to demonstrate that a practical application can be made on the line that is thus indicated.

Professional Interest in the World's Fair.

The publication of the bird's-eye views of the Columbian Exposition grounds and buildings, the latter drawn from the approved designs, has given to the world some conception of the magnitude of the enterprise and its probable scope. To no other profession is this exposition so interesting as to the architectural, and from it can no other tradesman learn so much as the builder. Like architecture, this exposition takes within its scope all the necessities, and the luxuries as well, of mankind. To an architect it will show to what development the most ancient of all professions has been brought in this the latest inhabited country, and the methods employed in the construction of the buildings will teach more than years of investigation. To the builder or artificer the lines of instruction are endless, for here will material be used as never before, or like the designs of the buildings, it will show old materials and methods put to new uses. From the buildings, that only protect the valuable collection of samples of the ingenuity and industry of man, he will turn to these types of the highest development of labor-saving or labor conserving forms. Everything will be at its best and exhibit its latest improved aspect. In the arts industrial each workman or artist, no matter how perfect may be his ability to produce, will gather something from this collection of the world's progressive thought, and find that others have thought, in some things at least, to better purpose than he. Perhaps one of the greatest advantages will be the facility for comparison of materials or methods. Side by side will stand the best of each country, each in its own way demonstrating the ability of a people, and each striving for superiority. Through this comparison will the combination be made that shall perchance eclipse them all. In the effort of the Illinois Chapter of the American Institute of Architects to secure a special building or department for the exhibition of drawings or models of the world's architecture and the world's building materials and methods, the architects and builders of the world are deeply interested. The foreign societies will be asked to collect and send drawings and to aid in making the exhibit of professional advancement of the greatest value and interest, and place the time-tried methods and forms of an old world side by side with the fresh and vigorous efforts of a new century of progress.

A New Supervising Architect Appointed.

Willoughby J. Edbrooke, supervising architect of the treasury department vice Windrim resigned, is a paragraph of Washington news that has created considerable comment, not only in architectural circles but in the daily press of the country. Mr. Windrim came into the office through the earnest solicitation of the secretary of the treasury, strongly recommended by the postmaster-general at the beginning of the last administration, and has filled this difficult position with credit. We could have said distinction, if it were possible for a supervising architect to win such in the present status of our nation's architectural affairs. After three years of labor he retires without the adjunct of a scandal attached to his name, for which he should consider himself fortunate, and leaving the department in much better condition than that in which he found it. Mr. Edbrooke is as well qualified as his predecessor and will take up the work with energy, and, through his long experience as an architect, much of it gained through years spent upon public work and as administrator of the architectural affairs of the second city in the United States, with intelligence. We wish Mr. Edbrooke every success. He is wise enough to see that his safety from adverse criticism lies in seeing that his designs are creditable and the affairs of his office are governed by himself and not by politicians, and if when he retires he has added the weight of his influence to that of his predecessors toward the reorganization of the office, and given to his native city a new and commodious public building in place of the ruin in which it now attempts to do business he will have done well and his administration will meet the approval of the people and of his architectural confrères.

Joint Committee Meeting to Formulate Building Laws.

The recommendations passed by the joint committee from the Fire Underwriters' and Engineers', Building Inspectors', the Architects' and the Builders' associations, which met at New York, April 2, has occasioned considerable comment throughout this country and Canada. At the meeting it was at first proposed to enter into a discussion looking toward the formulation of a uniform building law, but after four hours spent in informal discussion it was shown that a satisfactory conclusion could not be arrived at, and, even if formulated, such a law could hardly be enforced if adopted. It was finally decided to formulate a general recommendation which should be placed before the legislators of the various states. The committee after discussing the recommendations, which are printed in full on another page in this issue, decided to meet yearly hereafter for the purpose of making suggestions and generally reviewing the building business together. It is certain that great good will be accomplished through the future meetings of this committee, the next meeting of which will take place at Cleveland in February next, at the time of the annual convention of the National Association of Builders.

Architectural Design.*

BY NORMAND S. PATTON, ARCHITECT.

HAVING thus briefly considered some of the principles that should govern architectural design, let us trace rapidly the leading styles of architecture and notice how these principles are illustrated, and also how some of them have been disregarded ever in the styles called classic.†

The history of modern architecture follows the same course as that of modern history. The foundation is in Greece, then for centuries the whole interest centers in Rome. When the barbarian hordes invaded the imperial city, architecture along with other arts of civilization took refuge in Constantinople. Here it came again under Greek influence and finally issued forth, this time spreading over all western Europe.

When we think of Greek architecture there arises before us the vision of the Temple as almost the only building which they considered worthy of architectural treatment. To the ordinary spectator one Greek temple will stand for the whole set. A slight examination will show, however, a considerable difference in the detail of the columns and entablature, and we recognize the Doric and Ionic styles. The general type of the building is the same in both styles, and its chief characteristic is simplicity; a one-story rectangular structure surrounded by columns, the whole covered by a gable roof. The space from one column to another is covered by stone lintels or beams. The noticeable point in all Greek work is the extreme refinement to which all the proportions and form of the building and its details were carried. The student soon discovers that even Doric temples are not all alike, but that there is steady progress from the older and crude forms to the refinement of the Parthenon, the culmination of Greek art.

The Greek preferred simplicity and his favorite style was the Doric. The Ionic was employed when he wished to show greater delicacy and lightness. The Corinthian order was invented by the Greeks, but only a few examples remain, it seemed to them too luxurious or too frivolous for important works.

In the Greek Doric temple we find marvelous unity and simplicity in the design, the massive tapered columns are suggestive of strength; the proportions were studied with greatest care so that the various dimensions should bear the most pleasing relation to each other. The greatest refinement and delicacy was attained in the outline of the moldings, so that the Greek temple is perhaps as near faultless in its design as any structure erected by the hands of man. But we must bear in mind the simplicity of the problem the Greek had to solve. It was a much easier task than to devise suitable decorative forms for the complicated buildings demanded by the civilization of the Romans, of the Middle Ages or of our own day.

When we consider the Roman buildings we are struck immediately by the fact that architecture covers a much wider field than with the Greeks.

The Roman temples were among the least important of their buildings. The Roman mind ran to the execution of justice and to popular amusements rather than to religion. When a Roman erected a temple he based it upon the Greek idea, but the Doric style was altogether too plain for his notions, and the delicacy and refinement of the Ionic seemed hardly proper to express the Roman idea of magnificence; but the Corinthian column, with its sculptured capital, pleased the Roman's fancy and he developed it and employed it more frequently than any other form.

The Maison Carrèe at Nîmes, France, supposed to be a temple of Diana, is the most complete Roman temple that remains to us and is sufficient to illustrate this type of a building.

The great feature of Roman buildings is the development of the arch and the vault. When no means were known of spanning an opening in masonry except by a lintel or beam, architects were obliged to confine themselves to forms with narrow spaces between columns and there was no method of constructing a roof or ceiling except by the use of wood. The arch was invented by the Etruscans and developed in a wonderful manner by the Romans. By means of the arch they could cover vast areas and do this with the use of small material, which required no derricks or costly machinery to raise in place. The arches used by the Romans were semicircular in shape. Their vaults were in three forms: the continuous semicircular arch, or barrel vault, such as we use in the top of a tunnel; the intersecting arch, formed by two tunnels crossing each other at right angles, and the circular dome.

The Romans, although great builders, were poor artists. We must admire the variety and size of their constructions but when it comes to the treatment of the ornamental forms they fell into error. It is always easier to borrow an article ready made than to design and manufacture a new one; therefore, the Romans borrowed their decorations from the Greeks and frequently employed Greek artists and architects to design their buildings. To be sure, the Romans modified, in many respects, the Greek forms, so that the Roman orders are distinctly different from the Greek, but they overlooked the important fact that in the Greek architecture the order, consisting of the column with its appropriate entablature, formed the whole building, and if you take away this order the building vanishes with it; whereas, the Romans employed columns with their bases and entablatures as mere decorative forms applied to their arched construction. This is shown very clearly in the triumphal arch of Constantine at Rome. Here we have a central arch for the roadway with smaller arches on each side for foot travelers. Each arch springs from a molded course called an impost. The whole forms a very pleasing group, but in front of these arches are placed four columns resting on high pedestals which are quite independent of the arch construction. It is evident that we can take away these four columns and a complete system of construction and ornament remains. The impost at the springing line of the central arch cuts into the fluted pilaster at the back of each column in a very awkward manner. The column, in fact, is entirely out of place and does not fit the arches and has no duty to perform except to hold a statue which could have been held by a much less pretentious support.

The arch of Trajan is of similar design, and illustrates the one great failing of Roman architecture, which has been copied in modern times in the so-called renaissance or revival of classic architecture. They used columns and cornices, not because the structure suggested a column in a certain place, but because a column is a handsome thing in itself, and so they put one on wherever decoration seemed to be called for.

We hear so much said about the wonderful progress of the nineteenth century, that few people who have not seen the ruins of ancient Rome have any conception of the advance made in the arts at time of the Roman Empire, whereas, many of the Roman buildings surpass in extent and massiveness any structures that have been erected in the Middle Ages or modern times.

The baths of Caracalla illustrates the extent and complexity of Roman buildings as compared with any that preceded. The main building covered an area of 730 feet by 380 feet, which is 50 feet longer and 100 feet wider than the capitol at Washington. It contained many large halls with hot, cold and tepid baths sufficient to accommodate 1,600 bathers at a time.

There is no class of Roman buildings which is more interesting to us from a historical point of view than the basilicas. These were the places where courts of justice were held and popular assemblies gathered. There were two types of basilica, one with the roof and ceilings of wood, the other in which masonry vaults were used. The basilica of Trajan is the best type of the first. It consists of five aisles separated by rows of columns, or as we should describe it when compared with medieval cathedrals, it has a central nave with two narrow aisles each side. The basilica of Maxentius is the most magnificent specimen of the vaulted basilica and indicates immense progress in the art of building over the wooden roofed style. The whole building was 195 feet by 250 feet inside and consisted of a central aisle 85 feet in width and 120 feet in height. About the same width as that of Saint Peter's at Rome and much wider than any of the medieval cathedrals. The ceiling of this central nave was composed of three intersecting vaults. At each side of the center aisle in the place of the double aisles of the Trajan basilica, we have three large barrel vaults set at right angles to the central vault. Three of the vaults that remain standing, although of much less size than the central vault which has fallen, are of greater span than was ever attempted by the medieval builders.

When we endeavor to trace the beginning of Christian architecture we find that no exact line of demarkation can be drawn between it and the pagan buildings which preceded it. Under the Mosaic dispensation exact instructions were given for the building of the Tabernacle and the Temple of Solomon, but it is in accordance with the principles of Christianity that no rules were laid down by our Savior or his apostles for the arrangement of Christian temples or places of worship. During the first three centuries of the Christian era a gradual change had been taking place from paganism to Christianity.

Long before Christianity became recognized by the state, paganism had lost its hold until there was a gradual transition until the time of Constantine, about 300 A. D. Then when the Christians were permitted to come out of their hiding places in the catacombs and worship God publicly, the buildings which they found best adapted to their use were the Roman basilicas, and many of these buildings were made use of by Christian churches. It was, therefore, natural that the churches erected should follow the type of the basilica.

The basilica of Saint Paul's, outside of the walls of Rome, burned in 1822 and rebuilt of the same size and in the same general style as the original basilica, may be taken as a representative of the Christian basilica at its best. The floors are polished marble, columns of polished granite with white marble capitals, the walls decorated with mosaics, the ceiling ornamented with gold. This interior illustrates the progress that had already been made by the Romans in the use of columns, which are no longer placed in front of a pier which sustains the arch, but the column itself is made to carry the arches. The unpleasant features of this design are the square form of the room and the small size of the arches which seem dwarfed by the vast extent of wall above.

Rome itself never submitted to foreign influence, and we find only the three styles, Roman, Romanesque and Renaissance, which is but a return to the errors from which they once escaped. But in other Italian cities the effect of outside influence was felt. Saint Mark's, at Venice, with its five domes, its wealth of mosaic and ornamentation, shows clearly the Byzantine influence. The architecture of Byzantium, or Constantinople, was the result of Roman forms modified by the Greeks and Arabs, so that when the reflex influence of this eastern architecture was felt in Italy the Greek and Arabic forms were added to those already familiar on Italian soil.

The leaning tower at Pisa is an example also of Byzantine Romanesque architecture.

About the year 1000 the star of architectural empire moved westward into France, and thither we must follow. The frequent burning of the wooden ceilings and roofs of the basilica churches led them to adopt a masonry vault such as we have already seen in the basilica of Maxentius at Rome. Most of the learning of this time was in the

* Lecture delivered at the Art Institute, Chicago, and revised by the author for publication in THE INLAND ARCHITECT.

† NOTE.—The remaining portion of the lecture as delivered was illustrated by stereopticon views. The omission of the illustrations in this article has necessitated modification and abridgement, so that the reader must consider the examples as fragmentary rather than a connected history of design.

monasteries of the Clusinian order. And to this order we are largely indebted for the development of Romanesque architecture. The Roman vaults contained immense masses of masonry, as if the whole building had been made solid and then scooped out, but this did not suit the Christian builders. They could not afford to use such an extravagant amount of material, especially when they built of stone instead of the cheaper brick and concrete used by the Romans. The doctrines of Christianity led them to avoid all deceits and shams and make every part of the building serve an honest purpose, and their scientific attainments contribute to the same result in the adapting each support to the weight to be carried, and in concentrating the thrusts of the vault in certain definite points and there meeting them by a resistance calculated to balance without superfluous material.

The Romanesque architecture spread to England, where it is known as the Norman style. The interior of the noble cathedral of Durham is a good type of the style, and shows how the column has become an essential part of the construction and now supports the arch instead of being placed in front of it.

St. Stephen's at Caen illustrates the French Romanesque. You will notice pointed arches in several of these buildings indicating portions built at a later date. The transition from the Romanesque to the Gothic is much less marked than that from the Roman to the Romanesque.

The greatest difficulty met by the Romanesque builders was in constructing the intersecting vaults. The central nave of their cathedrals was usually about twice the width of the aisles. If the vaults over the aisles were made square, then the spacing of the columns must be the same as the width of the aisle. This would divide the ceiling of the nave into rectangles twice as long as they were wide. It is manifestly impossible to make two semicircular arches of the same height, one of which is twice the span of the other. The Romanesque builders adopted various expedients to overcome this difficulty, but none of them were entirely successful, but when the pointed arch was invented it offered a ready solution. If you consider the two arcs forming a pointed arch as hinged at the top you can increase or decrease the span of the arch by moving the bottoms of each arc outward or inward as you open or close a pair of scissors.

The crypt of the old Abbey of St. Denis, near Paris, is Romanesque in style as the abbey was founded in the third century and rebuilt in the seventh or eighth century. About the year 1121 the celebrated Abbot Suger determined to erect a new church in the place of the old one. The façade is also apparently a Romanesque design, for round arches are used, although the pointed form appears in some places. But as soon as we enter the interior of the church we find that we have left behind the Romanesque style and have a new style with the pointed arch or Gothic. The nave, as it now stands, is not the one built by Suger but one that was rebuilt at a later date and has since been restored. But the abbey church as left by Suger was a Gothic and not a Romanesque design, and it marked the beginning of a new style.

The Gothic architecture of France reached its highest development in the Sainte Chapelle at Paris and the church of St. Ouen at Rouen. Here we see Gothic architecture in great perfection, the flying buttersses on the sides take the thrust of the vaulted ceiling and convey it to the ground. Pinnacles on the buttresses are to give added weight at a point where it is needed. Notice how the ornament is all connected to the construction in such a manner that we can scarcely say, this is construction and this is ornament.

The Gothic architecture thus born on the soil of France spread to England and other countries of Europe. Westminster Abbey at London illustrates the principle of unity by its absence. The towers were completed by Sir Christopher Wren, who knew little of Gothic architecture, which fact is very apparent in the design. In the interior, however, we find a magnificent example of English Gothic design.

Even in ruins, Gothic architecture is beautiful. Every fragment seems to be filled with life. Such ruins as those of Melrose Abbey gives an insight into the construction of Gothic vaults even better than the finished building. One great difference between Gothic vaulting and that which preceded it is the introduction of ribs. The Roman vaults consisted of enormously thick masses of masonry, which meant great weight and required correspondingly large supports. The Gothic architects made deep ribs of stone intersecting each other and then filled in between these ribs with a comparatively thin mass, which may perhaps be likened to the cloth of an umbrella stretched over the ribs.

One example will suffice for German Gothic, the magnificent cathedral at Cologne, whose double spires are the highest in the world with the exception of the Washington monument. But when we think of the designs of the two we can hardly mention the Washington monument the same day with the cathedral. German work is thought to lack the artistic feeling displayed by the French, but the workmanship is marvelous.

It seems like presumption to criticise such a building as the cathedral of Cologne, but if something must be said it is that the height of the interior is too great for the other dimensions and has the effect of dwarfing the people who occupy the building.

Even Italy was invaded by the Gothic, especially the northern cities, but the style never took a deep hold as in the more northern countries. The Italians appeared to have adopted Gothic because it was fashionable and they used its forms in a decorative manner but often with a disregard for the construction which was not manifested in France or England.

In the façade of the Sienna cathedral the center gable evidently represents the end of the roof and the two side gables the ends of the smaller roofs. But having seen this building and peeked around the side I can assure you that there is no roof behind these side gables. This illustrates the fact to which I have alluded, that the Italians are not so much governed by the construction, but erect a gable if they think it will look well from the front even though there be no roof behind. This façade is a wonderful combination of sculptured marble with colored mosaics, and I feel less inclined to criticise Italian architects than I do to envy them the sunny sky that will permit the use of such materials.

With the Gothic architecture we have completed all possible forms of construction in mason-work. We have used lintels and arches, round, elliptical and pointed, and vaults of all descriptions; and any other forms must be some modifications of these. We have found that the Greeks used the lintel in a rational manner, that the Romans developed the round arch, but failed in the artistic treatment of it. The Romanesque builders worked out successfully the problem of the round arch style and the Gothic completes the list by showing us the wonderful possibilities of the pointed arch. When we adopt an entirely new material, such as iron or wood, then we must invent new forms appropriate to these materials and should not copy forms adapted only for stone.

The corner of the courtyard of the Chateau of Blois, built by Louis XII, is a charming illustration of the domestic Gothic of that period. When his successor Francis I came on the throne, the people began to tire of Gothic and to imitate the Roman forms.

The effect of these classic forms is seen in the great spiral staircase, but the whole spirit of design is Gothic. Near this staircase has been built at some later period an arcade in the true renaissance style which brings us back to the starting point of Roman architecture as if no progress had been made in twelve or thirteen centuries.

Before taking up American architecture, I wish to call your attention to a style which does not receive much attention in the books on art. But of all buildings in Europe none are to me of greater interest, as illustrating the methods by which true architectural style is developed from the conditions of the problem and the material to be used, than the Swiss cottages. We all admire them — think them very picturesque; but probably you have never stopped to think why it was that these particular forms were adopted by the Swiss. A genuine Swiss cottage is a log house built of solid logs; these are squared and laid horizontally and halved together at the corners exactly as log cabins were built in the early days of this country. A Swiss cottage is an artistic log cabin in which almost every detail of arrangement can be traced to some structural necessity. I will imagine that you ask the following questions and will answer them: Why do they make the roof with such an enormous projection? Because they found that wood, when kept dry, will last for centuries; but if the water is allowed to penetrate it soon decays. The roof is to keep the rain from the walls. Why the flat slope of the roof? Because the split shingles are not nailed but laid on the rafters and would slide off if steeper. Why are the windows grouped together? Is it because they think this the most beautiful form? Suppose we should make five or six separate windows in the front of this cottage; the logs would all be sawed into short lengths, greatly increasing the labor and weakening the construction. The Swiss avoid this by making the logs in as long lengths as possible and grouping the windows together with vertical timbers separating them. What is that curious projection in the center of the front, terminating in a bracket in the top? This building is not a single house but a double one; this projection is the end of the party wall; the timbers forming this wall being halved into the timbers of the front wall, the ends project through on the outside. At the top of this middle wall the timbers overlap each other so as to form a bracket for the support of the overhanging roof. In the same way the side brackets are formed of the side wall timbers projected out. We see some carving on the front. Is this sawed out of a thin board and nailed on? Where you see a string course above the windows, this marks the line of the floor. The log forming this string course is thicker than the others, projecting both inside and outside. The inside projection forms the base, the outside projection the string course, the ornamentation being carved in the solid wood.

American architecture began by copying whatever was the fashionable style of architecture in the old world. The old Colonial was a reflection of the prevailing type of Renaissance in England. Then came the discovery of the Greek ruins at Athens and immediately Greek temples became the fashionable architecture of the day. In the sub-treasury at New York, we have a Greek Doric temple as if it had been imported.

In the Treasury Department at Washington is an Ionic portico attached to a building with Ionic pilaster between which are three stories of windows. The absurdity of this arrangement was soon seen, and hence our government changed its style of design and piled one set of columns and cornices upon another as in the postoffice at New York.

In this building we have gone back again to the days of Rome — columns put in front of arches with which they have no connection whatever, but the faults of this building are too numerous to mention.

Some architects thought that the Norman style was worth copying, and hence we have the Smithsonian Institution at Washington. A picturesque group of buildings, but I imagine not specially adapted for their purpose. Some architects thought that Gothic would do for churches, and Grace Church in New York and others were erected in this style. Finally in England they became tired of the classic forms and attention was called to the beauty of medieval architecture. Then came the Gothic revival which spread to this country. In England they fell into the error of copying the forms of the Gothic architecture instead of the principles. Forms go out of date, but principles are eternal. We should design on the same principles as the builders of the Gothic cathedrals. But the true applications of these principles will lead us to change the form to suit our changed

conditions. The Gothic revival was preached in this country as a reform in architecture morals, and you undoubtedly remember how Eastlake would have us believe that a building or at least its furniture must not only be honest but uncomfortable, awkward and crude.

Pointed arches are remarkably adapted to stone vaults, but they were found to be inconvenient when applied to domestic or business buildings. The round arch is better for such purposes and has decided advantages when we use brick; for the pointed arch cannot be made of brick alone without an unsightly joint at the top.

This practical difficulty in the management of pointed arches caused architects to turn their attention to the Romanesque as a style in which the semicircular arch was treated in the same rational manner in which the Gothic deals with the pointed arch. In fact Romanesque and Gothic are the same in principle but differ only in form. Perhaps it is fortunate for us that the examples of Romanesque work are mostly fragmentary, for this has prevented us from copying them outright. The beginning of Romanesque in this country as a distinct architectural movement may be said to date from the building of Trinity Church, Boston. This made the reputation of the architect, H. H. Richardson, who confined himself entirely to this style. There were other architects working in the same direction but Richardson held the foremost place. Notice in the tower of Trinity, which is the most successful part of the design, the wonderful grouping of the windows. The tower has the character, so common in Gothic, of impressing us as if it grew naturally from the soil as a tree grows.

Richardson is dead, but the style has taken a deep hold upon the younger members of the profession and is destined to live. It will live because it is founded on true principles of design. In the so-called "Classic architecture" we have furnished us simply certain definite architectural forms of columns, cornices, arches and bases and we can erect only such structures as can be made by combination of these forms. Designing in Classic style is like building with children's building blocks. There are five different boxes of blocks manufactured, called Tuscan, Doric, Ionic, Corinthian and Composite. These boxes of blocks differ only slightly from each other and each contains one kind of column, pedestal, base, arch and entablature. There are, to be sure, several sizes of these blocks in each box, but the entablatures and columns are always in the same proportion. Some very pretty things can be made by piling up these blocks, but they are utterly useless in meeting the requirements of modern buildings. Our American schools of architecture make a great mistake when they endeavor to teach by means of this building-block style rather than by principles of design that are applicable to any style. In the Romanesque as in the Gothic, columns and arches may be made of any proportion to suit each particular case. There is the greatest flexibility in the use of arches and lintels in the same design. Designing in such a style is like the work of the sculptor modeling in clay which may be wrought into any form or proportion, as compared with the piling up of the ready made and unchangeable forms of classic architecture.

The Romanesque of today is truly of American growth. It is not a revival of the ancient Romanesque nor is it a copy of European work; it is rather a continuation and development of Romanesque. The art critics have for years been calling for the invention of an American style of architecture. Now that we have a style that is rational and which we may fairly claim as our own it is time that our schools of architecture ceased to copy the false methods of the French "École des Beaux Arts" and become the exponent of a living style.

Extracts from Our French Exchanges.

TRANSLATED AND ARRANGED BY W. A. OTIS, ARCHITECT.

THE destruction of theaters by fire is becoming more and more frequent, still but few appreciate the fact that from December, 1889, to 1890 the total number of these buildings so destroyed reached twenty-three. The list, as appearing in *La Semaine des Constructeurs*, is as follows:

1889.	December 20.	The German Theater at Pesth.
	December 22.	The Liceo at Salamanca.
	December 22.	The King Humbert Theater at Florence.
1890.	January 1.	The Theater of Zurich.
	January 3.	Theater at Porth, Wales.
	January 7.	Exchange Theater at Brussels.
	January 7.	Theater of the Alcazar at Havre.
	January 13.	Sebastian Theater at Montauban.
	February 20.	The Municipal Theater at Amsterdam.
	March 16.	The Thoff Theater at Stettin.
	March 24.	The City Theater at Bromberg.
	June 9.	French Theater at Constantinople.
	June 11.	Variety Theater at Brooklyn.
	July 1.	Theater at Troy, Alabama.
	July 17.	Queen's Theater at Manchester.
	August 26.	McVicker's Theater, Chicago.
	September 2.	The Tivoli at Bremen.
	September 5.	Calypso Theater at Catania.
	September 18.	Theater at Lourches.
	October 1.	Hippodrome at Bordeaux.
	November 15.	Municipal Theater at Irkoutsk.
	November 15.	Summer Theater at Dublin.
	December 7.	Theater at Clermont-Ferrand.

THE FRENCH EXPOSITION AT MOSCOW.

So completely are we interested in our own Columbian fair of 1893 that the expositions in other quarters of the globe have been of secondary interest to this community. Nevertheless, on May 1 of this year a national French exposition is to be opened at Moscow under the direct patronage of the imperial government, from which the manufacturers and artists of Paris are expecting far more important results to themselves than from the Chicago fair. According to *La Semaine des Constructeurs*, the Russian government has graciously granted to the organizers of this exposition the temporary use of a palace. This building, which forms a part of the crown property and belongs personally to the czar, was built in 1872 after the model of the famous rotunda of the Champs-de-Mars, which in 1867 served for the housing of the exposition to which Napoleon III invited all the reigning sovereigns of Europe. That building architecturally was certainly not a great success, one writer comparing it to an immense sausage upon a colossal plate with a portico all around it. However, it pleased the Russians to copy it, but since 1872 it has remained vacant, and now the restoration has been placed in the hands of French engineers at Moscow. The main palace is composed of two grand circular galleries surrounding a central garden where are fountains which will be lighted by electricity. These two concentric galleries are traversed by eight aisles. Beds of plants separate these aisles which are reserved for the different exhibits, so that there is light and air in abundance.

All around the building is an extremely large park where are located other features of the exposition; a theater, a captive baloon, a beautiful artificial waterfall with grottoes, etc., an imperial pavilion for receptions of officers of the court, and a panorama and cottages occupy a portion of the space. At the right the finishing touches are just being put to an immense machinery hall, which promises to be as fine as that of the Paris exposition of 1889, so that, taken all in all, a magnificent location and numerous well-chosen novelties and attractions are giving promise of a most wonderfully successful exposition, which will undoubtedly strengthen the bonds already joining the two hereditary enemies of Germany.

THE NEW MUNICIPAL ESTABLISHMENT FOR DISINFECTION AT PARIS. FROM "LA SEMAINE DES CONSTRUCTEURS," JAN. 10, 1891.

In the rue Récollets, near the quai Valmy, the attention is attracted to a low and squatty construction in the midst of high surrounding buildings. Its appearance is most simple, but its evident careful construction indicates it to have been built for some unusual and particular purpose. It is, in fact, in this building, or rather group of buildings, that is installed the municipal disinfection service, and is the only one of its kind in our capital.

The importance of this service cannot be disputed, and the authorities are to be congratulated upon having successfully inaugurated this establishment. A dozen years since the board of health, upon the report of Messrs. Pasteur and Leon Collin, demanded the erection of disinfecting establishments at Paris. Proposals for the construction and material, as well as the choice of suitable ground in each arrondissement, were obtained, but it was only in 1887 the sanitary board submitted to the municipal council a proposition for the erection of two disinfecting establishments, but only one of them has as yet been constructed. It is to be remarked that the Refuges, rue du Chateau des Rentiers, already was provided with a disinfecting furnace, but the one just built is much more important and similar to one in Berlin, with important modifications.

The arrangement of plan is very ingenious; the different branches of the service are there very comfortably installed, and the whole forms a model for the others which the city desires, or we should say ought, to build.

The programme given the architect was in conformity with the latest hygienic ideas, and contained the following general conditions: The separation must be complete between the articles to be disinfected and those already cleansed. The disinfecting furnace must have two doors, one for putting in the infected articles, this door to open upon the side of the courtyard denominated arrival; the other for taking out the disinfected articles, to open upon the side denominated departure. The wagon used for transporting these articles must itself be disinfected after each trip. Finally the workmen employed in the manipulation of these articles should not have any contact with the workmen on the other side without having first changed their clothes and taken special baths; for this reason, they must not be able to go out from the part where they are working except by passing through two rooms — a vestibule and lavatory — each one with two doors, one of which can only open when the other has been first closed by automatic means.

M. Bouvard, the architect, carried out the programme as follows: The general plan divides the structure into two distinct parts by means of a continuous wall; at the left is the receiving portion, to which the objects to be cleansed are brought; at the right is the disinfected portion, while at the end of the division wall, upon the street front, is a special pavilion for the administration, having sight and access to both portions. Wagons arriving enter the court, unload, and then passing on to the back of the yard are, together with the horses, disinfected by the means of atomizers which sprinkle them with a thousandth solution of corrosive sublimate. The horses unharnessed and disinfected are placed in the stable at the end of the court, while the wagons are placed in a carriage house.

The infected objects, especially linen, are subjected to a rinsing in a special vat, and then are placed in furnaces filled with superheated steam. Other objects than cloths are placed in little wagons, and while passing through to the other side subjected to a fumigation by some disinfecting material. Objects of no value are burned in the furnaces used for generating the steam for the cleansing furnaces.

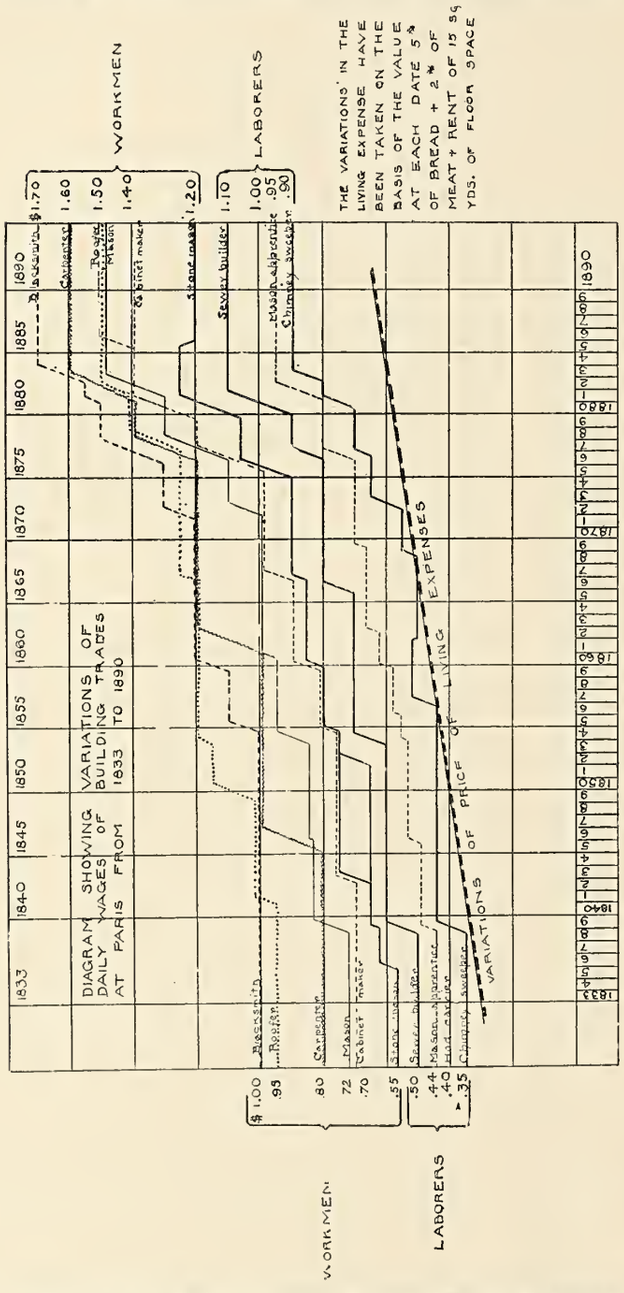
The wagons used in delivering the purified objects have in the right-hand courtyard a special barn. Thus, then, the arrangement of the plan establishes a complete separation between the two services, leaving only one communication for the inspector. The construction

of this building was commenced September 5, 1889, and the formal opening took place July 21, 1890. The total cost was about $21,000, exclusive of ground.

CHANGES IN WAGES OF FRENCH WORKMEN IN FIFTY YEARS.

Some time since the Minister of Public Instruction and Fine Arts addressed a communication to the Central Society of French Architects asking for information as to the changes during the last fifty years in the wages of workmen connected with the building trades.

A committee appointed by this society has just made a most lengthy and exhaustive report upon the subject, all of which has been published in *L'Architecture* of February 14 and 21, together with the numerous tables accompanying this document. One of the most interesting of the diagrams (which is here reproduced), figured in



American money, shows at a glance the variations in both wages and cost of living during the past fifty-three years at Paris, and in a pictorial manner gives one the substance of the report. It appears that the wages of workmen in these trades have nearly doubled, while the expense of actual necessities of life have increased but comparatively little. However, the committee find that the total of the workingman's expenditures have followed about the same advance as their wages, and although with the increase of the necessities of life is calculated better lodging, better clothing and better food, it appears that the excess now earned goes almost exclusively to luxuries, tobacco and drink. As a result the committee deplore the lack of economy and foresight on the part of this group of the laboring classes, and call upon all persons interested in social questions to aid in the preaching of a crusade for economy and savings.

ADMISSION TO THE ÉCOLE DES BEAUX ARTS AT PARIS.

American students investigating the question of the architectural department of the École des Beaux Arts have so great difficulty in obtaining exact information as to the requirements of admission that the following from *L'Architecture* may be of assistance: For the enrollment for admission to the examination at the school, the applicants must furnish, if Frenchmen, an official copy of their certificate of birth; if foreigners, they must present at the office of the secretary of the school a letter (of introduction) from the resident minister, ambassador or consul-general of their nation.

Every applicant must also present a letter from the professor of the atelier he wishes to enter, stating that the bearer is sufficiently advanced to enter the examination. These examinations take place twice a year, in February and in June, and consist of two series of examinations. The first series, entirely of design, is composed —

First: Of a free-hand drawing (in pencil, crayon, charcoal or ink as preferred) of either a head or some ornamental cast. It must be executed in eight hours (ordinarily four sessions of two hours each).

Second: Of an architectural drawing and composition, according to some given data. This work must be executed in one single session of twelve hours, the pupils being separated from each other in small alcoves ("en loges").

Third: The modeling in clay of some bas-relief ornament after a plaster cast, to be finished in eight hours.

Only the applicants who successfully pass these first three examinations are then permitted to enter for the second series, which is composed —

First: Of an examination, both oral and written, in the history of art.

Second: Of an examination in arithmetic, plain geometry and rudiments of algebra, as follows:

(*a*) Problems and examples, written and executed, "in loges."

(*b*) Oral examination and blackboard illustrations.

Third: Of a rigid examination in descriptive geometry.

Applicants passing these examinations become "élèves à l'école," and members of the second or lowest class.

In order to satisfactorily prepare for these examinations it is only desirable that a pupil spend six months previous to that time in certain preparatory courses, which are partially carried on in connection with school, and partially by paid tutors.

A Code Governing Reception of Bids, Etc.

THE Buffalo Builders' Association Exchange have adopted and issued a code for the government of the reception of bids and other matters in connection therewith, taking into consideration the proposition of plans and specifications, the proper province of the sub-contractor, etc. It has been approved by the Buffalo Chapter American Institute of Architects and is as follows:

CODE.

WHEREAS, The manner of receiving bids on work prepared by architects and others has varied, and to make a uniform and fair method of the practice; now, therefore, be it resolved, that on and after this date we, the members of the Builders' Association Exchange, decline to submit bids for work unless the following code is used and adopted:

RELATING TO PROPOSALS AND AWARDS.

Just and proper methods which should prevail when estimates are solicited from *contractors* in the building trades.

PLANS.

1. Drawings prepared for final or competitive estimates must be sufficient in number and character to represent the proposed works clearly, and shall be to a scale of not less than one-eighth of an inch to the foot (except block plans), and be rendered in ink, or some permanent process, colored, figured, and otherwise marked in such a manner as to clearly show all kinds of material to be used, thickness of walls, etc., in the construction.

DETAILS.

2. Proper details must be furnished for work that is not otherwise sufficiently shown.

SPECIFICATIONS.

3. Specifications must be in ink. They shall be definite, where the work is not clearly shown by drawings. Every distinctive class of work to be included in the contract must be mentioned and placed under its appropriate heading.

RESTRICTIONS AS TO SUB-CONTRACTORS.

4. Contractors must be notified at time of estimate, if they are to be restricted in the employment of sub-contractors.

NOTICE FOR OPENING BIDS.

5. Before opening bids, the bidders shall be notified of the time when and the place where the bids will be opened, and in the presence of the attending bidders.

PERCENTAGE ON SUB-CONTRACTS.

6. Contractors shall be allowed a compensation of 5 per cent on all sub-contracts, which at the time of estimating are "reserved," or not called for in their portion of the specification, but which may be assumed by them by request of the owner or architect, after the bids have been received and opened.

Contractors shall not be denied contracts upon the work covered in their original estimate, on account of declining to assume the aforesaid reserved sub-estimates.

SUB-CONTRACTS.

7. A contractor who may refuse to become a sub-contractor shall not thereby forfeit his right to the award.

AWARD.

8. When work is to be let for which estimates have been solicited, unless previous notification to the contrary has been given, the lowest invited bidder shall be entitled to the contract, and all minor changes shall be agreed upon with him, provided his prices are equitable. Should the prices for changes made by the lowest bidder not be deemed equitable, it shall be settled by arbitrators, one of whom shall be appointed by the owner and the other by the bidder, they to appoint a third if necessary, and the majority decision shall be final.

If radical changes are made, the whole competition may be reopened.

Bidders must not be allowed to amend their estimates after the bids have been opened and before the award.

9. Bids shall be binding upon the bidders for not more than sixty days.

10. No payments on contracts shall be less than 90 per cent of the value of work done; the remaining 10 per cent to be paid within thirty days after the completion of the contract. Sureties will be furnished by the contractors, if so required by the owner; and in such case the payments shall be 100 per cent of the value of work done.

11. The uniform contract adopted by the American Institute of Architects, the Western Association of Architects and the National Association of Builders is recommended.

COMPENSATION FOR ESTIMATING.

13. Should all solicited bids be rejected, or the owner refuse to contract with the lowest invited bidder within sixty days from the date on which the bids

are submitted, or refuse to abide by a decision of a majority of the arbitrators, then the said owner shall compensate the lowest invited bidder as follows:

For all cases where the bid does not exceed $1,000, $10.

For all cases where the bid exceeds $1,000, and does not exceed $5,000, one-half of 1 per cent upon the excess over $1,000, and $10 added.

For all cases where the bid exceeds $5,000, and does not exceed $20,000, three-eighths of 1 per cent on the excess over $5,000, and $30 added.

For all cases where the bid exceeds $20,000, and does not exceed $40,000, one-fourth of 1 per cent on the excess over $20,000, and $86.25 added.

For all cases where the bid exceeds $40,000, one-eighth of 1 per cent on the excess over $40,000, and $136.25 added.

FAILURE TO CONTRACT.

13. Should the lowest invited bidder, at any time within sixty days from the date on which bids are submitted, refuse to contract at his bid, or to abide by the decision of a majority of the arbitrators, the said bidder shall pay the owner liquidated damages (not a penalty) in the same amounts and ratio stated above for "compensation for estimating."

WILLIAM D. COLLINGWOOD, President.
Dated March 21, 1891. EDWARD L. COOK, Secretary.

This code has been approved by resolution of the Buffalo Chapter of the American Institute of Architects.

The Joint Committee on Building Ordinances.

THE Joint Committee on Building Ordinances, called by the National Association of Fire Engineers, met at the National Board of Underwriters, 156 Broadway, New York, on Thursday and Friday, April 2 and 3. The delegates were composed of seven members from the American Institute of Architects, National Association of Builders, National Board of Underwriters, National Association of Building Inspectors and National Association of Fire Engineers. Mr. L. P. Webber, chief of fire department, Boston, chairman, called the meeting to order; Henry A Hill, Cincinnati, secretary. At the roll call the following members were present:

From the American Institute of Architects: Napoleon Le Brun, New York; W. W. Carlin, Buffalo; George C. Mason, Jr., Philadelphia, Pennsylvania; Alfred Stone, Providence, Rhode Island; T. M. Clark, Boston, Massachusetts.

From the National Association of Builders: William H. Sayward, Boston; Stacy Reeves, Philadelphia, Pennyslvania; Warren E. Conover, New York; and W. H. Gorsline, of Rochester, New York.

From the National Board of Underwriters: E. A. Walton, New York; George P. Sheldon, Brooklyn.

From the National Building Inspectors: John S. Damrell, Boston, Massachusetts.

From the National Association of Fire Engineers: D. J. Swenie, Chicago, Illinois; William R. Joyner, Atlanta, Georgia; A. C. Hendrick, New Haven, Connecticut; G. W. Taylor, Richmond, Virginia; Henry A. Goetz, New Albany, Indiana; Hugh Bonner, New York; A. P. Leshure, Springfield, Massachusetts, and H. A. Hills, Cincinnati, Ohio.

After roll call an essay on the "Desirability of Uniform Building Ordinances, and the loss of life they would prevent if buildings were properly constructed," was read by John S. Damrell. Following this there was general discussion by various members, which finally resulted in the appointing of a committee by the chairman, consisting of Messrs. Stone, Swenie, Walton, Reeves and Clark, to draft a set of resolutions in order to expedite the business of the convention. After this the meeting adjourned until the following morning, when the committee presented a report which was amended and adopted in sections, each section being discussed and considered separately.

REPORT OF COMMITTEE AS ADOPTED.

The committee appointed to prepare suggestions for consideration believe that it would be impracticable at present to draw up a detailed building law, which would be applicable to all cities without local modifications, and that more good could now be accomplished by presenting the points which are agreed to be of the greatest importance and of universal application, and which should form the basis of all codes of building regulations. In reporting, however, only such suggestions of special importance as they think it best to adopt at present, the committee recommends that a standing sub-committee be appointed to receive and consider such observations as may be made from time to time in regard to improvements and additions to the code proposed, and to endeavor to promote its adoption throughout the country; and that the various bodies uniting in this effort to improve the construction of buildings be requested to continue their delegates so that the combined committee may be a permanent one, with at least annual meetings.

The committee advises that the legislatures of the various states should establish state building laws for the general control of the construction of buildings throughout the state, and that in all incorporated cities there should be a separate and distinct department for the inspection of buildings, whose officers should be appointed for long terms by the chief executive of the city, and should be removed only for inefficiency or maladministration; and that reasonable opportunity should be provided for appeal from the decisions of the department.

That fire departments, where such exist in any city or town, should be consulted by the building inspection department on all matters pertaining to fire risks, and the building department should furnish the fire department with records of the methods of construction of any buildings.

GENERAL REGULATIONS.

1. That all buildings over 70 feet in height be constructed throughout of incombustible materials, protected in the most approved manner of resisting fire.

2. That interior structural ironwork in all buildings be covered and protected by fireproof material.

3. That all buildings over 50 feet in height be furnished with permanent standpipes and ladders for the assistance of the fire department.

4. That the height of buildings to be erected should not be more than two-and-a-half times the width of the principal street on which they are located, and that no building or portion of a building, except church spires, should be more than 125 feet high in any case, except under a special permit.

5. That the open floor space, not divided by walls of brick or other incombustible material, in all buildings hereafter erected for mercantile or manufacturing purposes, should not exceed 6,000 square feet without special permission based upon unusual and satisfactory precautions.

6. That every building to be erected which shall be three stories high or more, except dwelling houses for one family, and which shall cover an area of more than 2,500 square feet, should be provided with incombustible staircases, inclosed in brick walls, at the rate of one such staircase for every 2,500 square feet high in area of ground covered.

7. That wooden buildings erected within 18 inches of the boundary line between the lot on which they stand and the adjoining property, should have the wall next the adjoining property of brick, or when built within 3 feet of each other shall have walls next to each built of brick.

8. That if damage occurs to property by fire or by any other cause, which can be proven to result from failure to comply with provisions of the law, then the owner of the property where the fire or defect originated shall be responsible therefor. A certificate from the inspector of buildings or other proper official to be considered sufficient evidence that the law has been complied with.

SPECIFIC REGULATIONS.

This committee also suggests the following, for specific regulations of the highest importance:

A. In all buildings, of every kind, the space between the stringers of wooden stairs, if plastered or boarded underneath, should be stopped by filling with incombustible material at three places at least in every flight of stairs.

B. All hearths in buildings with wooden floor beams should be supported by trimmer arches of brick or stone.

C. In every building, the space between all studding and furrings, both of inside partitions and outside walls, in the thickness of the floor, and for 6 inches above, should be filled with incombustible material. Also that the continuous space between the joist of every floor, ceiling and roof shall be effectually cut off at every point where the joists are supported.

D. All brick party walls, and brick outside walls adjoining neighboring property, should be carried up above the adjoining building.

E. At least 4 inches of brick should intervene between the ends of wooden floor beams entering a brick party wall from opposite sides.

F. The walls of brick buildings should be tied at intervals by the floor beams, which, if of wood, should be so anchored to the walls that, in case they are burned off, they will not, in falling, overthrow the walls.

The meeting, after passing the following resolution, adjourned to meet at the same time and place as should be fixed upon by the National Association of Builders for their next annual convention.

RESOLUTION.

Resolved, That this committee, having examined with some care the preliminary suggestions made to the combined committee by the National Association of Fire Engineers, wish to make this minute: That while time has not permitted the committee to go over section by section the various requirements proposed, they have been very favorably impressed with the general character of the regulations, and do not hesitate to say that their leading features might with advantage be incorporated in any building law for the larger cities.

ALFRED STONE,
D. J. SWENIE,
JOHN S. DAMRELL, } Sub-Committee.
STACY REEVES,
E. A. WALTON,
T. M. CLARK,

Texas State Association of Architects.

THE sixth annual meeting of the Texas State Association of Architects was held in the Chamber of Commerce, Fort Worth, January 20, 1891, the members present being: G. E. Dickey, second vice-president; J. Riley Gordon, S. B. Haggart, S. P. Herbert, J. J. Kane, P. S. Rabitt, M. R. Sanguinet, G. W. Stewart, secretary; Albert Ullrich, treasurer; James Wahrenberger, president.

The secretary announced that the following architects had been admitted to membership: C. C. Diboll, Dallas; C. A. Gill, Dallas; J. S. Moad, Dallas; A. A. Messer, Fort Worth; Paul Hellwig, Austin. Oscar Lynch, of Fort Worth, was elected honorary member.

The following is a list of members in good standing: A. B. Bristol, Denison; Albert F. Beckman, San Antonio; George E. Dickey, Houston; C. C. Diboll, Dallas; C. A. Gill, Dallas; J. Riley Gordon, San Antonio; Alfred Giles, San Antonio; S. B. Haggart, Fort Worth; Eugene T. Heiner, Houston; Paul Hellwig, Austin; Samuel P. Herbert, Waco; Frank W. Kane, Fort Worth; George S. Kane, Fort Worth; J. J. Kane, Fort Worth; J. Larmour, Austin; W. W. Larmour, Waco; Arthur A. Messer, Fort Worth; J. S. Moad, Dallas; Burt McDonald, Austin; M. McQuirk, Dallas; Alfred Muller, Galveston; P. S. Rabitt, Galveston; M. R. Sanguinet, Fort Worth; George W. Stewart, Dallas; Nathaniel Tobey, Galveston; Albert Ullrich, Dallas; James Wahrenberger, San Antonio; A. O. Watson, Austin. Honorary members: E. F. Redfield, Galveston, and Oscar Lynch, Fort Worth.

Competitions and the lien law were discussed, and also the bill now before the legislature regulating the practice of architecture. Mr. Wahrenberger being appointed to look after the latter measure.

The following resolution was passed as the sense of the association regarding competitions:

Resolved, That the Texas State Association of Architects hereby recommend to all committees contemplating the erection of public buildings the advisability of having one or more professional architects to assist them in the selection of designs therefor.

Mr. Gordon, seconded by Mr. Ullrich, presented a resolution as follows:

That, for the advancement of professional intercourse and instruction, be it resolved, that each member bring or send to the next and subsequent conventions any drawings, sketches, molds or other matters of interest to the profession, and place same on exhibition in some suitable place allotted therefor by the local committee, who will take charge of them and return them to their rightful owners in good condition and free of cost.

The resolution was adopted.

The announcement of the sudden death of Mr. John W. Root, secretary of the American Institute of Architects, having been made, the following resolution was presented:

Resolved, That the Texas State Association of Architects extend to the American Institute of Architects its heartfelt sympathy in the loss of so valuable a secretary, so true a man and so valuable an architect as was John W. Root, deceased.

Resolved, That a copy of this resolution be sent President R. M. Hunt, the bereaved family and the professional press.

The resolution was adopted by a unanimous vote, all the members standing.

The committee on nominations presented the following names, and upon motion the secretary was instructed to cast one ballot for the entire ticket:

President, George W. Stewart; first vice-president, George E. Dickey; second vice-president, S. B. Haggart; secretary, A. O. Watson; treasurer, S. P. Herbert; executive committee, Burt

McDonald, chairman, M. R. Sanguinet, Albert Ullrich, P. S. Rabitt, Eugene T. Heiner.

On motion of Mr. Dickey, seconded by Mr. Rabitt, Galveston was selected as the place for the holding of the next annual meeting. On motion, a vote of thanks was extended to the president and members of the Commercial Club for their kind attentions, and also to the president and members of the board of trade for the use of the Chamber of Commerce hall and the committee rooms, also to the press of the city of Fort Worth.

The next annual meeting will take place in Galveston on the third Tuesday of January, 1892.

Meeting of the Executive Committee American Institute of Architects

A MEETING of the Executive Committee of the American Institute of Architects was held April 3 at 18 Broadway, New York.

There were present architects Richard M. Hunt, E. H. Kendall, R. W. Gibson, of New York; W. W. Carlin, of Buffalo, and George C. Nimmons, of Chicago, secretary pro tem.

The minutes of the last meeting, held January 3, which were the last taken by John W. Root, late secretary of the Institute, were read and approved.

Letter ballots for the admission of candidates to membership were opened, but it was found that there was only one, Mr. Marling, who was fully qualified for membership. The others were not members of any Chapter, and therefore not eligible to membership in the Institute, according to the late amendment to Article I, Section II of the by-laws. They were therefore declared elected on the condition that they comply with this by-law.

The question was discussed as to how members, living in districts where there were no Chapters, were to be admitted to the Institute, and it was the sense of the committee that since the territory of Chapters was undefined, such candidates should be required to join the Chapter nearest to them, and that the amendment therefore was applicable to all cases. Six applications for membership were also received, and of these only one, Mr. J. M. Carrére, of New York, is a member of a Chapter. The others were provisionally elected.

A communication from Messrs. Pratt & Lambert, of New York, was read in which they requested the indorsement of the Institute in a prize competition for draftsmen in designing. The prizes to be $100, $75 and $50 for the first, second and third prizes. The competition to be known as the "Pratt & Lambert Prize Competition." The matter was referred to a committee.

The resignations of Messrs. John W. Hammond, of Frankfort, Indiana, and J. W. Griffin, of Watertown, New York, were read and accepted.

This meeting being the first held since the death of Mr. Root, a committee of one was appointed to draw up suitable resolutions. Mr. Adler was appointed as such committee.

A vote of thanks was tendered Mr. Nimmons for his valuable services as secretary pro tem in carrying on the work of the late Mr. John W. Root, and in publishing the annual proceedings in such a complete and satisfactory manner. The treasurer was also instructed to pay him the secretary's regular salary for the time of his services.

Mr. D. Adler was elected secretary for the remainder of the year.

The matter of new charters to Chapters was also discussed, and they will be forwarded to the Chapters entitled to them, it being held that all Chapters recognized as such at the date of consolidation are entitled to new charters.

Architects' Commissions in Spain.

IN the annual proceedings of the Italian Society of Engineers and Architects is the following schedule of commissions (*honoraria*) adopted by the Royal Academy of San Fernando, Madrid, Spain, a reference to which appeared in the March number.

Local work is arranged in thirteen classes, according to cost; and a sliding scale of commissions is devised in the form of percentages on the cost of each class:

Class	1.	Buildings	to	cost	within	$ 5,000			
"	2.	"	"	"	between	5,000	and	$ 7,500	
"	3.	"	"	"	"	7,500	"	10,000	
"	4.	"	"	"	"	10,000	"	15,000	
"	5.	"	"	"	"	15,000	"	20,000	
"	6.	"	"	"	"	20,000	"	25,000	
"	7.	"	"	"	"	25,000	"	30,000	
"	8.	"	"	"	"	30,000	"	35,000	
"	9.	"	"	"	"	35,000	"	40,000	
"	10.	"	"	"	"	40,000	"	45,000	
"	11.	"	"	"	"	45,000	"	50,000	
"	12.	"	"	"	"	50,000	"	75,000	
"	13.	"	"	"	"	75,000	"	100,000	

Table showing charges in percentage on cost of building.

Class....	1	2	3	4	5	6	7	8	9	10	11	12	13
A.....	5	4.75	4.5	4.25	4	3.75	3.5	3.25	3	2.75	2.5	2.25	2
B	2.5	2.375	2.25	2.125	2	1.875	1.75	1.625	1.5	1.375	1.25	1.125	1
C.....	2	1.9	1.8	1.7	1 6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8
D.....	0.5	0.475	0.45	0.425	0.4	0.375	0.35	0.325	0.3	0.275	0.25	0.225	0.2
E.....	0.5	0.475	0.45	0.425	0.4	0.375	0.35	0.325	0.3	0 275	0.25	0.225	0.2

A—Full architectural services. B—Drawings and estimate. C—Drawings only. D—Estimate. E—Copies of drawings.

When the cost exceeds $100,000, the architect is to receive an annual stipend of $600 to $800 in addition to the one per cent for drawings and estimate. If required by the owner, the architect must always render an estimate of cost. On this estimate his commission will be calculated in case the work should not proceed; likewise in case it should be executed according to plans and the total cost should exceed the estimate. If the actual cost on the same condition falls within the estimate, the architect's commission will be based on the cost instead of the estimate. When preliminary sketches only are furnished deduct ten per cent from the above schedule.

For buildings at a distance not exceeding sixteen miles from the architect's office, the charge for superintendence will be increased by twenty-five per cent in addition to traveling expenses. When the distance is between sixteen and forty miles add fifty per cent plus traveling expenses to the schedule charge for superintendence. If the distance be from forty to eighty miles add seventy-five per cent, and for each additional eighty miles add one hundred per cent, all with due regard to the conditions and exceptions previously noted.

For superintending public buildings a suitable salary is to be allowed. For designing public buildings the commission will be double the amount charged for private work. The charge for valuations of public buildings will be the same as for private ones. For verifications of considerable importance, also for monumental restorations a special agreement will be made as to compensation.

For ordinary restorations, repairs, etc., requiring the aid of architectural drawings, the commission will be the same as for new work. Where no drawings are required the architect should receive a salary not less than $30 per month for work lasting six months or longer, and for work of less duration a percentage as follows for valuations:

Valuations of	work	within	$ 2,500,	commission	5	per cent.
"	"	"	5,000,	"	4.7	"
"	"	"	10,000,	"	4.4	"
"	"	"	15,000,	"	4.2	"
"	"	"	20,000,	"	4.1	"
"	"	"	25,000,	"	4.0	"
"	"	"	50,000,	"	3.0	"
"	"	"	100,000,	"	2.7	"
"	"	"	200,000,	"	2.4	"
"	"	"	400,000,	"	2.0	"

Where valuations are for the division of property among heirs, etc., add fifty per cent to the architect's commission. In case the architect should also be required to furnish separate plans of the various allotments of property among its claimants his commission will be doubled.

Chicago Carpenters' Working Agreement.

THE working rules adopted by the joint committee of Carpenters' and Builders' Association and United Carpenters' Council of Chicago, in effect April 13, 1891, to April 1, 1893, are as follows, to be enforced during the continuance of the contract, unless otherwise ordered by the joint committees:

1. That the working-day shall be eight hours, commencing at 8 A.M., and ending at 5 P.M., but the noon hour may be curtailed by special agreement between the contractor, or his representative, and a majority of the employés, but not in such a manner as to permit more than eight hours work. But if two or more shifts of men are worked in one day, the same men shall not work on more than one shift, and such shifts will not be considered overtime.
2. That the pay shall be by the hour.
3. That the minimum rate of wages shall be thirty-five (35) cents per hour from April 13, 1891, to April 1, 1893, inclusive.
4. That overtime shall be rated as time and one-half, and Sunday time shall be rated as double time.
5. That all journeymen carpenters shall receive their pay as often as once in two weeks; but when a journeyman is discharged, he shall be paid on the day of his discharge or on demand at the office.
6. That the apprentice system shall be governed by the state law.
7. No member of the Carpenters' and Builders' Association shall during the term of this contract make a reduction in the rate of wages of a carpenter without giving him due notice previous to making said reduction. This article shall in no way be construed as conflicting with Article No. 3.
8. No member of the Carpenters' and Builders' Association shall sublet or piece out their carpenter-work. Neither shall any journeyman who is a member of any association represented in the United Carpenters' Council be permitted to take piecework in any shape or manner from any owner or contractor, whether he be a member of the Carpenters' and Builders' Association or not.
9. Any journeyman carpenter, being a member of any organization represented in the United Carpenters' Council, may work for any person who does not pay less than the minimum rate of wages.
10. Any member of the Carpenters' and Builders' Association may at his discretion employ one helper to every five carpenters on each job, who shall be at liberty to use a saw, hammer and hatchet at any work on the job, and the rate of wages shall be as agreed between the employer and employé.
11. All apprentices now in the employ of any member of this association shall complete their apprenticeship with such member.
12. Any infraction of the provisions of this agreement by a member of either association parties to this contract shall be reported to the chairman of the respective arbitration committees, and to be by them investigated, and upon sufficient proof of the violation of any of the provisions of this contract, he or they shall be fined. The amount of fine to be determined by the joint committee. Upon non-payment of the fine, he or they shall be suspended from the association of which he or they are members; and it is further agreed that no employer shall again employ said journeyman carpenter while such fine remains unpaid. And no journeyman carpenter shall work for any employer who has been fined, and the same remains unpaid.

Wilbur F. Behel,	J. Gilbert Ogden,
Francisco Blair,	George W. Blackford,
W. Irving Clark,	J. B. Cogswell,
William Mavor,	J. H. McCune,
John Ramcke,	Robert Whimsett,
Committee Carpenters' and Builders' Association.	Committee United Carpenters' Council.

Personal.

Architect James R. Kimball, of Buffalo, has opened an office at 42 Morgan building, Buffalo, New York.

Architect Clarence L. Stiles, of Chicago, has gone into partnership with Mr. John L. Stone under the firm name of C. L. Stiles & Co.

Architect F. D. Hyde, of Dubuque, has associated with him in copartnership Architect W. H. Castner, of St. Paul, under the style of Hyde & Castner. Mr. Castner is a gentleman of exceptional ability as a designer and will aid Mr. Hyde in continuing the high grade of service to which his clients in the past have been accustomed.

Association Notes.

BUFFALO CHAPTER AMERICAN INSTITUTE OF ARCHITECTS.

The Buffalo Chapter of the American Institute of Architects have formulated and adopted the following schedule of charges, covering some points which they deem not sufficiently explicit in the regular schedule of the Institute. The purpose seems to be to take the Institute scale as a foundation and from it present a document to clients that will be more clearly explanatory of what the architect expects to do, and how he expects to be paid for his work, with the idea that this will more fully meet the requirements, coming, as it does, from the local chapter, than if it emanated from some foreign corporation. It is as follows:

STATEMENT OF ARCHITECTS' DUTIES AND CHARGES — FOR THE INFORMATION OF CLIENTS.

1. The charge for preliminary studies or sketches is 1 per cent.
2. For preliminary studies, general drawings and specifications, sufficient for contractors to estimate upon, 2½ per cent.
3. For preliminary studies, general drawings, specifications and details, sufficient for the proper execution of the works, 3½ per cent.
4. For preliminary studies, general drawings, specifications, details and general supervision of the works, except as hereinafter specified, 5 per cent.
5. The above charges apply to buildings or works costing $5,000 or more; for buildings or works costing from $2,500 to $5,000 a fixed charge of $250 will be made.
6. For services as mentioned in section 4, in making alterations and additions to buildings, 7 to 10 per cent.
7. For monumental and interior work, and where special designs and drawings are made for cabinet work, such as mantels, wainscoting, stairs, etc., an additional charge of 5 to 15 per cent.
8. An additional charge to be made for alterations and additions in contracts and plans, which will be valued in proportion to the additional time and service employed.
9. For advice in selection of carpets, furniture, light fixtures, tile, marble, stained glass, hangings, decoration, etc., 5 to 10 per cent.
10. The supervision or superintendence of an architect means such inspection by the architect or his deputy, of a building or other work in process of erection, completion, or alteration, as may be necessary to ascertain whether it is being executed in conformity with his designs and specifications or directions, and to enable him to decide when the successive installments or payments are due.
11. Special arrangements should be made for work not regularly supervised and for work out of town. If no such arrangement is made, visits will be charged for at the rate of $25 per day, or fraction thereof, and expenses.
12. On buildings where it is deemed necessary to employ a clerk of the works, the remuneration of said clerk is to be paid by the owner or owners, in addition to any commission or fees paid the architect. The selection or dismissal of the clerk of the works to be subject to the approval of the architect.
13. The above charges are payable as the successive steps are taken, and are based on the entire cost of the building or works ready for occupation, whether set forth in the plans and specifications, or ordered directly by the owner. New or old material used for the construction of the works and furnished by the owner is included in the cost, and is to be reckoned at its market value. The said cost of the building or works includes the heating, plumbing, gas piping, electric work, hardware, etc.
14. For the above compensation the architect will furnish two sets of plans and specifications and one set of details for the client. He will make and retain in his office in addition one set each of tracings, specifications and details, from which he will make, at any time, copies at actual cost. All drawings and specifications, as instruments of service, are and remain the property of the architect.
15. The above schedule has been adopted by the Buffalo Chapter of the American Institute of Architects.

H. L. Campbell, Secretary. G. J. Metzger, President B. C. A. I. A.

Buffalo, March 10, 1891.

These charges are in conformity with those adopted by the Royal Institute of British Architects and the American Institute of Architects.

THE SKETCH CLUB OF NEW YORK.

At the annual meeting of the Sketch Club of New York, held at the Hotel Hungaria, Saturday, April 4, the following executive committee was elected: Charles H. Israels, A. L. C. Marsh, Emil Ginsburger, J. Nat. Hutchins and Danford N. B. Sturgis.

At a subsequent meeting, this committee organized by electing Charles H. Israels, president; J. Nat. Hutchins, vice-president; Emil Ginsburger, secretary; Danford N. B. Sturgis, assistant-secretary, and A. L. C. Marsh, treasurer.

The club feels that the prospects on the threshold of its third year are very bright, and that its success and its continued and increasing usefulness, both in a social as well as in a professional and educational sense, are assured.

The club has now a membership of fifty-seven and is steadily increasing.

THE ATLANTA ARCHITECTURAL SKETCH CLUB.

In response to a general invitation sent out to the draftsmen of Atlanta, to assemble for the purpose of organizing an architectural sketch club, a number of them met, March 9, in the office of Bruce & Morgan.

W. Claude Frederic was made president and C. U. Trowbridge, secretary pro tem.

After a discussion regarding plans of organization, etc., the election of regular officers took place, the following gentlemen being elected for one year: C. O. Sheridan, president; W. L. Stoddard, vice-president; C. R. Ward, secretary and treasurer.

It was decided to have the first competition handed in on March 23, the subject being, "A Front Door for a Residence." Size 36 inches by 76 inches.

The club has the approval and good will of the many architects of the city, some of whom were present at the meeting.

The next meeting will be held March 16, at the office of Bruce & Morgan, who have kindly tendered the use of their rooms until the club has arranged for permanent quarters.

CORPUS CHRISTI, TEXAS, ASSOCIATION OF ARCHITECTS.

A local association of architects was organized February 17, 1891, at Corpus Christi, Texas, and the following officers elected: J. R. Gordon, of San Antonio, president; F. M. Hodges, of Corpus Christi, vice-president; Earl Silvan, of Corpus Christi, secretary; James Hull, of Corpus Christi, treasurer. Executive committee, J. R. Gordon, F. M. Hodges, N. J. Glover, James Hull and Earl Silvan. All practicing architects in Southwest Texas were invited to join. The by-laws of the Texas State Association of Architects were adopted. The association is purely local, and will coöperate with the state association.

EDINBURGH ARCHITECTURAL ASSOCIATION.

At the ordinary meeting of the Edinburgh Architectural Association, April 9, a paper was read by Mr. A. H. Millar, of Dundee, on "Curiosities of Architecture in Dundee."

In giving a sketch of Dundee in stone and lime, Mr. Millar exhibited views of the Old Steeple, with ground plan and section; Lady Wark stairs, the Wishart Arch, Dudhope Castle, the Old Custom House in the Green Market, known as Drummond Castle; interiors of some of the chambers in the Franciscan Nunnery, and several of the old sculptured stones taken from the Vault and from Whitehall Close. These buildings in date ranged from the fifteenth till the close of the seventeenth century. Passing to the examination of more modern buildings, Mr. Millar alluded to the great change introduced by Mr. William Adam, the famous architect, by his design for the Town House, erected in 1734, and showed that many buildings of last century — St. Andrew's Church, the Trades Hall, the Episcopal Chapel, afterward known as Union Hall, and Trinity House — had been suggested by it. The next branch of the subject led him to the consideration of the street architecture of the olden time, and in a series of views chronologically arranged he showed the development of the modern streets from the wynds and closes of former times. The inner architecture of the closes — the courts and back tenements — were next illustrated by a number of views and descriptions of public buildings erected in Dundee during the last fifty years, which showed the great variety in styles of architecture now visible in the city. Mr. Millar acknowledged his obligations to Mr. A. C. Lamb, who had kindly placed at his disposal a selection from his extensive collection of sketches of Dundee in the olden time.

On the motion of Mr. W. W. Robertson, of Her Majesty's Board of Works, seconded by Mr. Ross, a cordial vote of thanks was awarded to Mr. Millar for his paper.

New Publications.

THE FIVE ORDERS OF ARCHITECTURE ACCORDING TO GIACOMO BAROZZIO, OF VIGNOLA, to which are added the Greek orders; edited by A. L. Tuckerman; published by W. T. Comstock, New York.

The editor in his preface assumes a demand in this country for this work of Vignola; and we hear that still another edition is in prospect. We hope that the assumption of these editors is true; for, whatever be the prevailing fad in architectural practice, the five orders in one form or another are destined continually to appear and reappear in much American work. Entirely aside, then, from any question as to the fitness of the Classic style for modern use or modern sentiment, if it is to be employed let it by all means be employed at its best, and not botched through presumptuous ignorance. In the ages when the Classic alone engaged the attention of architects, and when they were more content to study the perfection of a bit of detail than we to study an entire building, many variations of the Greek originals were proposed, weighed carefully, considered well, and rejected as lacking at some point. Out of the three Greek orders grew the five Roman orders, easily reducible to the Greek. The greatest of the Italian architects tried their hands at varying the proportions, and have left record of their success or failure. We are loth to say that further improvement is impossible, for to our taste Vignola improved on Palladio, as Palladio on Vitruvius; and the American draftsman may now be making tracings who shall yet improve on Vignola. All we can ask in reason, and this we must ask for the sake of the trusting public, is that, before the aspiring draftsman sets out to eclipse Vignola and to exhibit the five orders renascent, he should be familiar with the five orders in question. In fact, eclipses and renascences aside, the American habit is to serve too brief apprenticeships. This may not stand in the way of money-getting; but when it comes to art, however short life is, it is long enough to do well what we undertake, and this means, in the present instance, to study the five orders before using the five orders

As to this Giacoma Barozzi, he was born at Vignola, October 1, 1507, and, as all good architects have done and always will do, he made the town of his birth famous from the fact that it was his birthplace. In the second place, as always has been and always will be true of all good architects, he was of a family in reduced financial circumstances. And in the third place, as always must be true of architects who really deserve to be called good, he was a hard student and was somewhat familiar with kindred arts, being a student of sculpture and a painter of note. He built the famous Caprarola palace for Alexander Farnese, and designed numerous churches, portals and tombs, described by his Italian biographers with such words as "bellisima," "graziosissima," "maestrevole" and "magnificentissima," and still bigger words which I would quote if it were necessary, but which are not new to you, because they are what always have and will be said about the works of good architects. On the death of Michael Angelo he succeeded him as architect of St. Peter's, at Rome, which under the circumstances can be said of only one architect. And in spite of all these commendable things, he wrote several books, a thing which we trust will not have to be charged up against many good architects.

One of these books deals with the five orders, and has been edited, and edited, and edited, and is now edited again by Mr. Tuckerman. This latest edition is very complete, containing not only the five orders proper, but plates illustrating Greek work and kindred matter. Working details, measurements and other data are quite full,

and the size is convenient. In an edition published in Rome in 1770, by Spampani and Antonini, occur in connection with each order a comparative exhibit, showing how the order was treated by Vitruvius, Palladio, Serlio, Scamozzi and Vignola. We wish that something of this sort had been embodied in this edition. Mr. Tuckerman offers a scant text, and no index, this latter, perhaps, because he thinks that the student should know the book from cover to cover. On the whole, it is a good working edition, and we believe it to be timely.

Our Illustrations.

Mines and Mining building, World's Columbian Exposition, east elevation; S. S. Beman, architect, Chicago; 350 by 700 feet, height to cornice 64 feet.

Electricity building, World's Columbian Exposition, east and south elevations; Van Brunt & Howe, architects, Kansas City; 350 by 700 feet, height to cornice 70 feet.

Agricultural building, World's Columbian Exposition; elevation and plan of principal façade, McKim, Mead & White, architects, New York; 500 by 800 feet, height to cornice 70 feet.

Administration building, World's Columbian Exposition; east elevation, ground and colonnade plans, Richard M. Hunt, architect, New York; 240 by 240 feet; height to cornice, below colonnade, 140 feet; height from base to top of dome 260 feet.

Perspective view, World's Columbian Exposition, looking south, showing Manufactures and Decorative Arts building on the left, Electricity building on the right, the lagoon and bridge in the foreground, and the Agricultural and Machinery buildings beyond.

The following illustrations were issued with the March number and not recorded:

First, second and third prize drawings for Woman's building, Columbian Exposition. First prize, Miss Sophia G. Hayden, of Boston; second prize, Miss Lois L. Howe, Jr., of Boston; third prize, Miss Laura Hayes, of Chicago. Dimensions of accepted design, 200 by 400 feet; height to cornice, 50 feet.

Two bird's-eye views of the World's Columbian Exposition buildings and grounds as approved by the construction department, April 1, 1891. The area covered by the buildings and grounds shown in the views is about one mile square or 5,000 feet each way, the east and west dimensions commencing with the casino and reaching to the rear of the Horticultural building, and the north and south dimensions being from the north façade of the Illinois State building to the south façade of the Agricultural building. United States Government building, J. H. Windrim, supervising architect of the treasury department at Washington, architect; Illinois State building, W. W. Boyington & Co., architects, Chicago; Administration building, Richard M. Hunt, architect, New York; Agricultural building, McKim, Mead & White, architects, New York; Manufactures and Decorative Arts, George B. Post, architect, New York; Fisheries, Henry Ives Cobb, architect. Chicago; Machinery Hall, Peabody & Stearns, architects, Boston; Electricity building, Van Brunt & Howe, architects, Kansas City; Mines and Mining, S. S. Beman, architect, Chicago; Woman's building, Miss Sophia G. Hayden, architect, Boston; Horticulture, W. L. B. Jenney, architect, Chicago; Transportation building, Adler & Sullivan, architects, Chicago; Casino and Pier, Burling & Whitehouse, architects, Chicago.

NOTE.—In Columbian Exposition buildings approximate dimensions are given.

PHOTOGRAVURE PLATES.

(*Issued only to subscribers for the Photogravure edition.*)

Residence of William Pretyman, Edgewater, Illinois; Burnham & Root, architects, Chicago.

Residence of W. H. Bradley, Brookline, Massachusetts; Loring & Phipps, architects, Boston.

House for Mrs. Charlotte G. Listman, Kenwood, Illinois; H. H. Sprague, architect, Hyde Park, Illinois.

The Kimball building, Wabash avenue, near Jackson street, Chicago; Frederick Baumann and J. K. Cady, architects.

Buildings for the Leland Stanford Junior University, Palo Alto, California; Shepley Rutan & Coolidge, architects, Boston, Massachusetts. Three full-page views are given.

Legal Notes.

EVIDENCE IN MECHANIC'S LIEN CASE.

In order to make out a case for the enforcement of a mechanic's lien, the plaintiffs must prove the contract and then performance of it. The contents of a lost waiver of a lien, the loss of which is insufficiently accounted for, is inadmissible in evidence. Gunther *vs.* Bennett, Court of Appeals of Maryland, 19 At. Rep., 1048.

SUB-CONTRACTOR'S LIEN.

The Iowa code requires that statements of material furnished by a sub-contractor shall be filed within thirty days in order to give a lien. The owner of property on which improvements are being made cannot defeat a sub-contractor's lien for materials furnished by paying the principal contractor, if he knew of the sub-contractor's claim at the time of payment. Hugg *vs.* Hintrager, Supreme Court of Iowa, 45 N. W. Rep., 1035.

CONSTRUCTION OF BUILDING CONTRACT.

The clause in a building contract, to furnish "all stock and material * * * mentioned in the specifications," taken in connection with the specifications and the other parts of the contract, must be construed to include not only the crude materials, but the labor involved in finishing them and putting them in position, so as to make such a house as contemplated in the specifications. The measure of damages for failure to make a roof that would remain tight for two years, as called for by contract, is the difference of value as constructed, from what it would have been if it had been constructed according to contract, together with loss of rent caused by such failure. White *vs.* McLaren, Supreme Judicial Court of Massachusetts, 24 N. E. Rep., 911.

CONFLICT OF EXPERT EVIDENCE AS TO BUILDING.

Where experts are employed to estimate and testify as to the cost of a building, or the value of work therein, they are presumed to act with a natural leaning toward the interests of their craft, and when the estimates differ widely a court is justified in accepting, as the measure, the lowest estimate made in good faith by a fair expert. Hart *vs.* Dreyfous, Supreme Court of Louisiana, 7 South. Rep., 731.

DESCRIPTION OF LAND IN MECHANIC'S LIEN.

The Texas statute, which requires that a contract filed to secure a mechanic's lien shall be accompanied by a description of the lands, lots, houses and improvements made, against which the lien is claimed, is satisfied with the following description: "The brick city hall building to be erected in the city of Hillsboro." Scholes *vs.* Hughes, Supreme Court of Texas, 14 S. W. Rep., 148.

BREACH OF BUILDING CONTRACT.

In an action for breach of a building contract, it is proper, in order to aid in arriving at a correct measure of damage, for the complainant to show the cost of removal of defective material, and of replacing the same in accordance with the contract. Healy *vs.* Bulkley, City Court of Brooklyn, 10 N. Y. Supp., 702.

IMPLIED CONTRACT FOR BUILDING MATERIALS.

A firm of contractors bought some materials of complainants, agreeing to pay for them out of the contract price of the work; afterwards the owner of the property said he would pay for the materials. The materials having been used on his house, an implied contract arises, binding him to pay for all the materials. Carney *vs.* Cook, Supreme Court of Iowa, 45 N. W. Rep., 919.

GOODS SATISFACTORY TO BUYER.

When one party agrees to do a thing to the satisfaction of another, and the excellence of the work is a matter of taste, as a design for a draft, a piece of furniture or a suit of clothes, the employer may reject it without assigning any reason for his dissatisfaction. Gray *vs.* Alabama National Bank, City Court of New York, 10 N. Y. Supp., 5.

PLUMBERS' CERTIFICATE—POLICE POWER.

The Maryland statute requiring the plumbers to get a certificate of competency from the state board of commissioners of practical plumbing, is a reasonable exercise of the police power of the state, and not in conflict with the fourteenth amendment to the United States Constitution. Singer *vs.* State, Court of Appeals of Maryland, 19 At. Rep.

DENIAL OF LIABILITY BY CONTRACTOR.

A number of individuals assumed to act as a corporation for the purpose of carrying on the business of contractors and builders. They will not be permitted to avoid a liability arising by the terms of a bond they had entered into as a corporation, under the cover of a claim and allegation that they had no existence as a corporation. By assuming corporate powers they estop themselves to deny that they are incorporated. Jefferson *vs.* McCarthy, Supreme Court of Minnesota, 46 N. W. Rep., 140.

SUBROGATION OF PARTIES.

The defendant corporation entered into a contract with a county to furnish the iron work for a county jail and to become responsible to the other contractor for all delays caused by failure to put the iron work in in time. In an action against it for damages caused by delays, the following rule governs: "When one person, for a valuable consideration, engages with another to do some act for the benefit of a third person, the latter may maintain an action against the former for breach of such engagement." Grant *vs.* Diebold Safe & Lock Co., Supreme Court of Wisconsin, 45 N. W. Rep., 951.

MEASURE OF DAMAGES FOR TERMINATING UNPERFORMED CONTRACT WITHOUT CAUSE.

A contract was entered into by which the plaintiff was to erect in the building of defendant, a complete heating apparatus. Before work in the building was commenced, but after plaintiff had got the furnace and fixtures ready to put in place, the defendant, without cause, terminated the contract. Either party to a contract which has not been performed may terminate it without cause, thereby becoming liable to the other party in damages. In the case of a contract for a specific article or work, which, as in this case, is partially performed when the contract is rescinded, the contractor may recover compensation for what he has done, and the profits he would have earned had he been allowed to complete the contract terminated without fault on his part. Hale *vs.* Hess, Supreme Court of Nebraska, 46 N. W. Rep., 260.

LIABILITY FOR ACCIDENTS DURING CONSTRUCTION OF BUILDING.

A contractor was to do the carpenter, mason and iron work upon a building and also to flag the sidewalk; he was also to be responsible for accidents happening to individuals through his acts. The complainant was injured by stepping on some loose planks put down in the place of the sidewalk. The contractor did not begin work on the sikewalk until after the accident and denied liability on that ground. If the other contractors had performed their different contracts, and left the premises necessarily in his hands, the responsibility for the safety of the public devolved upon him, and though the planks were

in the first place put down by other contractors, and though he had not commenced work on the sidewalk, he will be liable to the complainant for the injuries received. Peard *vs.* Karst, Supreme Court of New York, 10 N. Y. Supp., 463.

STATEMENT REQUIRED IN MECHANIC'S LIEN.

Where the lumber used in the construction of a building was bought in gross, a statement of lien for materials is sufficient if it give the amount paid for such lumber, without specifying the price of each lot in detail, as it gives reasonable notice to purchasers and creditors of the existence and extent of the lien. School District No. 3 *vs.* Howell, Supreme Court of Kansas, 24 Pac. Rep., 365.

LIEN OF MATERIAL-MAN.

The Rhode Island statute provides that there shall be nolien for materials furnished, unless the material-man shall, within sixty days, give written notice to the land owners, if they be not the purchasers of the material, that he intends to claim his lien. Though the materialis furnished under an entire contract, to which the land owner is a stranger, the lien will attach only for that material furnished within sixty days of the giving of the notice. Newell *vs.* Campbell Machine Company, Supreme Court of Rhode Island, 20 At. Rep., 158.

CONSTRUCTION OF "SEASON."

Where a written contract of employment is expressed to be for "the season," no more specific limitation of the time being given, it is competent, in an action for wrongful discharge, to explain by verbal testimony what the term "season" meant, according to usage and custom of the particular trade or business with reference to which the contract was made. Wachtershauer *vs.* Smith, Common Pleas of New York City and County, 10 N. Y. Supp., 535.

Building Outlook.

Office of The Inland Architect,
Chicago, Ill., April 15, 1891.

Among the unfavorable influences which are to be noted in the business horizon at this time are the unsettled condition of the public mind on account of an actual or supposed insufficient supply of money; second, a downward tendency in prices, due to what in many quarters is regarded as an excess of producing capacity, and, third, the possibility of a wide-spread labor disturbance. On the other hand, some of the favorable influences may be enumerated as follows: First, the steady expansion of trade and commerce. Second, the liquidation of indebtedness throughout the country. Third, a more settled railway policy. Fourth, the equalization of production to consumption through trade and various other organizations. Business men of all kinds are especially anxious at this time to know whether this year will bring as much business as last. Upon this point there are some doubts in well-informed minds. While in certain sections of the country prosperity will be greater than last year, certain other sections may suffer somewhat. From all indications there will be an improvement in the condition of the agricultural interests. Manufacturers are, as a rule, doing well, although obliged to restrict production in many branches, among which are makers of iron and steel. The lumber interests, both north and south, are looking forward to a year of great activity. Prices are low and profits are reasonable. There are of course exceptional cases where extraordinary profits are realized, but there is a general leveling down tendency at work, and it will doubtless continue until unusual profits are exceptional. In the building trades there is still some uncertainty as to the volume of work that will be undertaken and accomplished. The laborers are, as usual, discussing the question of hours of labor and rates of wages. There will be no general strike in the building trades, and probably no very serious difficulties, taking the country at large. The miners are to be made the black sheep of the labor agitation this year, and should the strike be made as general as the leaders desire, it will no doubt cause a good deal of inconvenience which might be more far reaching than at present apparent. It will, however, be a dangerous experiment for the miners to make. The financial situation is satisfactory to eastern money lenders, but unsatisfactory to borrowers throughout the country. There is a determination spirit among the people to effect certain requirements, and the agitation will continue until the requirements are effected. Trade organization continues, and will not be impeded until the advantages of coöperative action among manufacturers will be generally effected. Abundant crops will go far to harmonize apparently conflicting interests between manufacturers and cultivators of the soil. Our export trade is growing steadily, not only in cereals and breadstuffs, but in manufacturing products, and the attention of buyers in foreign countries is being systematically attracted to the advantage of cultivating more intimate relations with the manufacturers and exporters of the United States.

Synopsis of Building News.

Baltimore, Md.—The Arundel Building Company will build a large apartment house, five stories, brick, to cost about $65,000.

Chattanooga, Tenn.—Architects Townsend & Stone have prepared plans for the two new buildings to be erected for Sullin's College, Bristol, Tennessee. One of them will be the main college building; it will be 70 feet square, three stories high, brick with stone trimmings and topped with a tower in which will be a clock so large that the time of day can be seen from any part of the city; to cost $25,000. For King's College, a four-story brick building, slate roof, steam, size 42 by 84 feet; cost $26,000. Also preparing plans for the Chattanooga exposition, several frame buildings; to cost about $60,000. For the East Tennessee Land Company, a three-story office building, size 58 by 68 feet, pressed brick and stone, hot air; to cost $20,000. For the City of Bristol, Tennessee, a market house, size 60 by 150 feet; cost $13,000. For J. H. Warner, a two-story residence, size 50 by 70 feet, pressed brick and stone, slate roof, hot water; cost $26,000. For A. B. Whiteaker, a five-story office building, size 33 by 64 feet, brick and stone, steam, hydraulic elevators; cost $25,000. For the Temple Court Building Company, a six-story office building, size 65½ by 100 feet, two stories stone and four stories pressed brick, steam elevators; cost $46,000. Also have in hand quite a number of moderate size residences, both in brick and frame, ranging from $3,000 to $10,000.

Chicago, Ill.—Architects Treat & Foltz: For Henry Schroeder, a four-story basement and attic store, office and flat building, to be erected on Milwaukee avenue, Chicago avenue and May street; it will have three fronts and cost $25,000. They are now tearing down old buildings. For C. W. Seneco, a three-story flat building, at 356 Belden avenue, pressed brick and stone, hot water heating, etc. For W. J. Goudy, on the northeast corner of Cleveland and Fullerton avenues, a four-story and basement apartment building, 99 by 133 feet in size; to cost $50,000. The front will be of red pressed brick and brownstone, with copper bay windows, interior finished in hard woods, and have steam heat and all improvements. For L. P. Friestedt, a two-story and basement flat building, with stone front and copper bay, to be erected on Park avenue. For W. J. Goudy, on Goethe street, a two-story stable, of granite fronts and slate roof, and inside finish in natural wood. The plans are about completed for the five-story factory, 250 by 170 feet in size, to be erected on Randolph street between Carpenter and Morgan streets, for the New York Biscuit Company. It will be constructed of pressed brick, granite and blue Bedford stone, with terra-cotta trimmings; the cost will be $350,000.

Architects Patton & Fisher are working on plans for the Kalamazoo, Michigan, public library; it will be a two-story and basement building of very handsome design, 70 by 100 feet in size, and cost $60,000. It will be constructed of Amherst stone all round, with a tile roof. They are also getting out drawings for the Kenwood Evangelical Church enlargement of 315 additional sittings. The same architects are working on drawings for Grace Episcopal Church, to be erected at Grand Rapids. It will be 80 by 90 feet in size, of pressed brick and stone, with slate roof, have hardwood interior, stained glass windows, steam heat, etc.

Architect Thomas Wing: For George Brauckmann, on George avenue, west of Vincennes avenue, two two-story basement and attic residences, of pressed brick and stone fronts, oak and cypress inside finish, slate roofs, steam heat; cost $15,000. For William Page he is working on plans for a block of three four-story dwellings; to cost $20,000. They will be erected on Prairie avenue near Twenty-fourth street, and have cut stone fronts, hardwood and pine finish, stained, plate and beveled glass windows, gravel roofs, steam heat, etc.

Architects Ostling Brothers: For C. F. Johnson, five two-story cellar and attic residences, 117 feet front by 60 feet deep, to be of rockfaced stone fronts, in Ashland variegated brownstone and buff Bedford stone, with slate mansard and gravel roof. The interiors will be finished in hard wood and pine, have stained, plate and beveled glass windows, furnaces and the best of sanitary arrangements, location Sidney Court, near Diversey avenue; cost $40,000. For P. L. Mooney, they are planning a three-story and cellar flat building of pressed brick and stone front, hardwood finish, sanitary plumbing, three furnaces, etc., to be erected at 444 Jackson Boulevard. For Hans Johnson, making plans for three-story and basement flat building, to be built at 27 Abbott street. For Mrs. Schulz, on Halsted street, near School street, a two-story cellar and attic frame residence.

Architect L. G. Hallberg: For John Mountain, on Dearborn avenue, near Burton place, a double three-story and basement residence, of Bedford stone front, oak and pine finish, steam heat and all the improvements; to cost $20,000. For John C. Murphy, corner of Elm and Townsend streets, a three-story store and flat building, of pressed brick and stone front, gravel roof and the sanitary improvements. For himself, on Dearborn avenue, near Burton place, a three-story residence, 25 by 70 feet in size, to have a Bedford stone front, oak and pine finish, slate mansard and gravel roof, plate and beveled glass, furnace, etc.

Architect J. C. Brompton: For Dr. L. W. Beck, at Normal Park, a block of frame two-story basement and attic flats, with a frontage of 611 feet and a depth of only 14 feet. They will have brick and stone basement, hardwood and common pine finish, mantels, bathrooms, closets, stained shingle roof, etc. The peculiar size of this ground necessitated a very skillful management of the plans, which result the architect seems to have achieved. For Charles Clark et al, a three-story and basement apartment house, 100 by 60 feet in size; to cost about $40,000; to be erected on Commercial avenue, northwest corner of Wilson avenue. It will have a handsome front of Tiffany pressed brick and stone, hardwood finish throughout, stained and plate glass windows, steam heat, and all the best of sanitary and modern improvements.

Architect Robert Rae: For G. A. Otis, five three-story and basement residences, on Oakenwald avenue near Forty-sixth street; they will have stone fronts, hardwood and pine finish, stained, plate and beveled glass, steam heat, and the best of sanitary improvements; cost $35,000; the mason-work is being done by H. C. Stacey, of 5436 Monroe avenue. He is also taking bids on an Episcopal church, 50 by 85 feet in size, to be erected in Englewood; it will be constructed of stone with slate roof, have handsome stained glass windows, pews to accommodate a congregation of 450, steam heat and hardwood finish. For T. G. Otis he is taking estimates for two three-story residences, to be erected on Sidney Court between Forty-fourth and Forty-fifth streets; the fronts will be of Roman pressed brick and stone, interior finished in hardwood, with furnaces, etc. For James Ingram he will take bids for a three-story apartment house, 50 by 105 feet in size; to cost about $40,000; the first story will be of rockfaced stone, and above of dark brown Roman pressed brick and Bedford stone; he will put in steam heat, hardwood and pine finish, the best of sanitary and modern conveniences.

Architect George Grussing: For Messrs. L. & O. Kolb, at 1373 and 1375 Madison street, a three-story and basement store and flat building, 50 by 67 feet in size; cost $16,000; the front will be of St. Louis pressed brick and Connecticut brownstone, interior finished in quarter-sawed oak, and all improvements. He is also making drawings for a two-story and basement school, 60 by 48 feet in size; to be built of common brick and Bedford stone, with slate roof, two furnaces, etc. For A. Pierce, at 1377 Madison street, a three-story and basement store and flat building, of St. Louis pressed brick and Connecticut brownstone, stained, plate and beveled glass, oak finish, tile floors, etc. For A. P. Mueller, at 609 North Halsted street, a two-story and basement store and flat building, of Tiffany pressed brick and Bedford stone.

Architect H. P. Harned: For A. A. Turner, a four-story and basement store and apartment building, 117 by 120 feet in size; to cost $100,000; to be erected corner of Forty-seventh street and Vincennes avenue. It will have two fronts of red Portage stone for the first story, and above will be of fine Tiffany pressed brick and stone, with handsome copper bay windows. The interior will be finished in hard woods throughout, and have marble wainscoting, tiled floors and marble stairs in all public halls, hot water will be supplied throughout the building; modern open plumbing, elevators, steam heat, etc., will be put in.

Architects Beers, Clay & Dutton: For Montgomery Ward & Co., on Michigan avenue, a six-story addition, 48 by 160 feet in size; to cost $75,000. It will be constructed of prèssed brick and stone to correspond with the present building. It will be of mill construction and have two new freight and two passenger elevators; steam heat, electric light, etc. For John Gary they have planned a three-story and cellar residence, on South Park avenue near Thirtieth street. The front will be of buff Bedford stone, interior finished in hard woods, steam heat, etc. For David Quigg, at Kenwood, a three-story residence, frame, stone basement, hardwood finish, furnace, etc. For Dr. Benson, at South Chicago, a two-story frame flat building, 75 by 60 feet in size; to cost $12,000. For. R. P. Smith, corner of Fifty-third street and Lexington avenue, a three-story brick-veneered residence, steam heat and all improvements; to cost $12,000. For W. A. Giles, at Austin, a three-story hotel and flat building; to cost $20,000. Pressed brick and stone front, steam heat and all improvements.

Architect Thomas Hawkes: For Vincent C. Price, on Division street near Penn, a three-story flat building, 42 by 55 feet in size; to cost $12,000; blue Bedford stone and Indiana pressed brick front. For Dr. Price, on Illinois street, fifty feet west of Cass, a six-story and basement manufacturing building, 50 by 100 feet in size; to cost $40,000. It will have a front of steel, steam heat, elevator, etc. Thomas Hawkes will remove to the Northern building, southwest corner of La Salle and Lake streets, in consequence of the Unity Building coming down.

Architects Burling & Whitehouse will remove to the Illinois Bank building, 115 Dearborn street; they are now working on drawings for the Young Mens' Christian Association building, to be erected on La Salle street; it will be of steel construction, and contain all the improvements. For J. T. Bowen, on Astor street, they planned a three-story residence of buff Bedford stone and pressed brick. For Colonel Loomis, on the Lake Shore drive, a beautiful residence in the Colonial style of architecture; to cost $150,000. For Father Henneberry, on Ashland avenue near Nineteenth street, St. John's Catholic Church; to cost $50,000; it will be built of buff Bedford stone and pressed brick, in the Romanesque type, with a high tower and slate roof, interior to be finished in red oak, and have pews to seat 1,500 people. For Dr. Hooper, on Astor street, a four-story residence of tile, brick and buff stone; to cost $30,000. For George Bullen, at

Nashota, Wisconsin, a handsome residence in the Tudor style of architecture, with flat roof and crenulated walls; to be built on the hillside, commanding a beautiful view of the lake; the cost will be $50,000. The nine-story office and bank building at Kansas City, they report as progressing rapidly; it will be a magnificent structure, 180 by 140 feet in size, and cost $1,000,000; it will have three fronts of pressed brick and granite, and will be elaborately finished.

Architect Otto H. Matz reports: Preparing plans for St. John's Boarding School, Hominy Creek, Osage Agency, Indian Territory, for Catholic Bureau of Indian Missions. This structure has a front of 150 feet, and consists of main building (68 by 50 feet) and three wings (each 26 by 40 feet), substantially built of local stone, three stories high, with chapel, mansard roof and belfry; cost $50,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

If "April showers bring forth May flowers," the crop will be simply enormous this year, for the month of March and April, at the time this effusion is given to the world (for the low price of subscription to THE INLAND ARCHITECT) has been in a constant state of drip.

Builders are not flowery in their nature as a rule, hence do not look upon showers as blessings when they want to make time in constructing buildings.

The "grippe" has tackled the builders here in a mild way, and their favorite lines are, as a wag expresses it:

"Oh, I've got the grippe,
With the sneeze and the drip."

Our Builder's Exchange is in an active state of eruption as far as progress goes. The pertinent circulars of the National Association are doing efficient missionary work, and before the year closes many exchanges now occupying rented quarters will hold receptions in their own "spacious parlors." Our Exchange has opened a stock subscription list to raise funds to erect a structure devoted to trade purposes. This is a step in the right direction. Cincinnati is also pushing forward, and I might also say *upward* in the direction of high buildings, and I sincerely hope that in a very few years to see all the prominent corners, some of which are now occupied by — well, I wont call names, by elegant structures.

The building trade lost by death last month a most valuable and highly esteemed member, Mr. L. H. McCammon, a man active in good works, and the words of Tennyson,

"But oh, for a touch of a vanished hand,
And the sound of a voice that is still,"

will find a response from his many friends.

The plasterers have gone on a strike for eight hours time and forty-five cents an hour, and they stubbornly refuse to arbitrate. Poor deluded mortals.

Architect Henry E. Siter reports: For the Protestant Episcopal Church, Pine Hill, Rev. A. B. Howard, rector, a chapel, known as the Chapel of the Nativity; materials: limestone, slate roof, hard and soft wood finish, pews, stained glass, etc.; cost $15,000.

Architect George W. Rapp has prepared plans for a beautiful office building for Frederick Eckstein, Esq., to be seven stories high; materials: stone, iron, pressed brick, asphalt roof, elevators, plate glass, etc.; size 47 by 100 feet; cost $100,000.

Architect M. Rumbaugh reports: For Mr. Harry Hulbert, a stone building; materials: iron, pressed brick, asphalt roof, hydraulic elevators, skylights, etc.; size 23 by 96 feet, five-stories high; cost $15,000. For Mr. A. C. Campbell, Ashland, Kentucky, a bank and office building; materials: brick, stone, tin roof, office fittings, vaults, etc.; cost $15,000.

Architect Gustave W. Drach reports: For Mr. Robert J. Morgan, a row of five houses; materials: stock brick, stone trimmings, tin roof, pine finish, blinds, mantels, gas, plumbing, glass, etc.; cost $40,000. For Mrs. D. Brown, Clifton, Ohio, a residence; materials: brick, furnace, plate and stained glass, slate roof, grates, mantels, plumbing, gas, etc.; cost $10,000.

Architects Crapsey & Brown report: For Mr. A. R. Burham, Richmond, Kentucky, alterations and additions to his residence; materials: brick, slate roof, pine finish, blinds, etc.; cost $8,000. For Waynesville, Ohio, a school house; size 68 by 68 feet, two stories; materials: brick, tin roof, furnace, furniture, blackboards, etc.; cost $20,000.

Architect A. O. Elzner reports: For Winchester, Kentucky, an opera house; materials: pressed brick, tin roof, chairs, frescoing, scenery, architectural iron, etc.; cost $30,000.

Architect George W. Vogel reports: For Church of Immaculate Conception, Newport, Kentucky, a school building, three stories high; materials: brick, furnace, slate roof, furniture, iron stairs, etc.; cost $20,000. For M. R. Smith, Corryville, a brick house, ordinary materials; cost $4,500.

Architect Jacob Rueckert reports: For F. Vogeler, Esq., Fifth and Walnut, a factory building; materials: brick, tin roof, elevators, ironwork, gas, plumbing, etc.; cost $40,000.

Architects Samuel Hannaford & Sons have drawn plans for a residence for J. H. Foss, Esq., of the Foss-Schneider Brewing Company; materials: stone, slate roof, furnace, stained glass, dumb waiters, tile floors, mantels, gas, plumbing, etc.

Architects G. & A. Brink report a house for Dr. T. M. Wittkamp; materials: brick, plate glass, ironwork, grates, gas, plumbing, tin roof, blinds, etc.; cost $16,000.

Architect Lucian F. Plympton reports: For Mr. J. J. Foley, a residence; materials: frame, slate roof, galvanized iron, stained glass, furnace, gas, plumbing, grates, blinds, etc.; cost $4,500.

Architects Des Jardins & Hayward report: For Mr. Dwight W. Huntington, two houses; materials: frame, slate roof, furnace, stained glass, grates, pine finish, gas, plumbing, etc.; cost $9,000.

Architects Aiken & Ketchum report: For Mr. E. B. Sargent (Walnut Hills), a residence; materials: frame, slate roof, plumbing, gas, stained glass, mantels, hardwood finish, etc.; cost $9,000.

Denver, Colo.—Architect J. J. Huddart has prepared plans for the new school building, to be of brick, and two stories high; cost $15,000.

Architect J. Hodgson, Jr.: For Messrs. Ittleson & Rose, a row of small houses; size 193 by 73 feet; stone and pressed brick; cost $50,000.

Detroit, Mich.—Architects Mortimer L. Smith & Son: For the Third Avenue Presbyterian Church Society, a new brick church, on the corner of Second and Forrest avenue, stone trimmings, slate roof, to seat 900; cost $16,000. For William Barclay, a brick and stone residence, on North side, Ferry avenue; to cost $12,000. For Ira Topping, a double brick residence, on Lincoln avenue, near Kirby; cost $8,000. For J. R. Whiting, a frame summer residence, on the St. Clair river; to cost $15,000.

Architects Van Leyen & Hackett: For George W. Chase, a three-story double brick residence, size 40 by 64 feet, stone trimmings and slate roof; cost $9,000. For the Psi Upsilon Society, Ann Arbor, Michigan, additions and alterations; cost $5,500. For Mrs. C. J. Watkins, a two-story frame dwelling, on Warren avenue and Hastings street, size 28 and 46 feet; cost $4,800. Contractor, Guy W. Vintor.

Architects Spier & Rohns: For Dr. Carl Bowning, a two and one-half story brick residence, pressed brick, cut stone trimmings and slate roof; cost $12,000. For Charles Wesch, a three-story store, size 47 by 70 feet, brick and stone trimmings; cost $10,000. For August Knorr, a two-story store and flat block, on Meldrum and Gratiot avenues, brick and stone trimmings; cost $10,000.

Architects Donaldson & Meier are preparing plans for Dr. Cleland, to remodel his building for office, on State and Griswold streets.

Architects Hess & Raseman: For Sigmund Rothchild, Harstens Island, Michigan, a frame summer residence; cost $6,000. For Charles E. Swales, St. Clair, Michigan, a two-story summer residence; cost $6,000.

Architects Malcombson & Higginbotham: For C. H. Habercorn & Co., a six-story brick manufacturing building, on Orchard and Seventh streets, size 55 by 150 feet.

Architects John Scott & Co.: For the Protestant Orphan Asylum, a three-story brick building, on Jefferson avenue and Adair street, size 97 by 115 feet, stone trimmings and slate roof; cost $30,000.

Architect Gordon W. Lloyd: For J. B. Ford & Co., Wyandotte, Michigan, preparing plans for several buildings for the manufacture of soda ash; to cost about $30,000. Also is preparing plans for the D. M. Ferry Seed Company, for an eight-story brick warehouse, on Croghan street, size 138 by 85 feet, stone trimmings and tin roof.

Architect A. E. French: For Charles C. Charbonneau, a two-story brick residence, on Commonwealth avenue; cost $12,000.

Architects A. C. Varney & Co.: For R. H. Brown, a two-story double brick residence, size 40 by 60 feet, stone trimmings; cost $8,500. For J. H. Brown, a two-story brick residence, stone trimmings and slate roof; cost $11,000. For Wagner Fakingle, two three-story brick stores and dwellings; to cost $11,000.

Mr. S. F. Falsma is erecting a three-story store on State and Washington avenues; cost $5,000.

Fort Wayne, Ind.—Architect F. B. Kendrick: For Messrs. Fisher Brothers, a four-story building; stone front, brick walls, asphalt roof; size 25 by 105 feet; cost $14,000. For the St. Joseph Catholic School, at Logansport, Indiana, a three-story brick school building; size 78 by 58 feet; stone trimmings, slate roof, iron cornice; cost $15,000. For Louis Mohr, two-story brick and stone store; size 30 by 70 feet; cost $6,000; contractor Fred Miller. For St. Marie's school, a two-story brick school building; size 70 by 129 feet; slate roof, stone trimmings; cost $18,000. For the St Patrick's Catholic School and sisters' residence, a two-story brick building; slate roof; size 80 by 56 feet; cost $12,000. Contractor, Fred Miller.

Kansas City, Mo.—Architects Schoper & Lussi: For Mrs. Annie Sobbe, a two-story brick business block, size 29 by 66 feet; cost $4,500.

Architect J. W. Pugh: For Chas. W. Moore, a two-story brick residence, size 30 by 48 feet, on Cherry street; cost $6,000.

Architect H. J. Simons: For Dr. Flanders, a four-story flat building on Pacific and Charlotte streets, size 142 by 68 feet; cost $40,000.

Architects James & James are preparing plans for the Grand Central Depot to occupy the whole of the block bounded by Third and Fourth and Locust and Cherry streets. This will be the biggest contract that will probably be let in Kansas City this year. This building will have a frontage of 300 feet on three streets, and will be U-shape, the trains backing into the court. It will be four stories in height and will be constructed of brick, stone, granite and terra-cotta. The cost of preparing the building and grounds will be $1,000,000, and of the building alone about $750,000.

The Winner Investment Company, builders, will be ready in a very short time to negotiate with contractors.

The Whitcomb, Bomlie Cabinet Company will erect a three-story brick cabinet factory at Twelfth and Porter streets, size 60 by 90 feet; cost $5,000.

Minneapolis, Minn.—Architects Long & Kees: For the Northwestern Fireproof Warehouse Company, a seven-story cold storage building; size 240 by 100 feet; pressed brick, stone trimmings; cost $300,000. Also for the Farmers' and Mechanics' Bank, a two-story bank building; 44 by 167 feet; brick, with stone front; cost $100,000.

Architect Warren H. Hayes: For Messrs. Thorpe Brothers, a five-story warehouse; size 35 by 80 feet; pressed brick, stone trimmings; cost $12,000. Also for the congregation of the Presbyterian church at Madison, Wisconsin, a two-story church building; size 110 by 73 feet; brick, slate roof; cost $40,000.

Architect C. F. Struck has prepared plans for William Wood, additions and alterations to store; cost $15,000.

Omaha, Neb.—Architects Bell & Berlinghoff, of Council Bluffs, Iowa; plans for new school building has been accepted. It will cost about $37,000.

Architect Sidney Smith: For E. J. Engelman, at Coin, Iowa, a two-story hall and store building; size 50 by 100 feet; cost $10,000.

Pittsburgh, Pa.—Architects Lindemans & Sauer: For the St. Stanislaus' congregation, a two-story brick church; stone trimmings; cost $100,000.

The Builders' Exchange are making arrangements for their new building which they intend to have second to none in the country. A. Peebles has been appointed architect.

Architect F. Sauer: For the South Side Turnverein Company, a three-story hall; brick and stone; size 60 by 121 feet; cost about $38,000.

Architects Alston & Heckert: For Thomas Carlin's Sons, three-story foundry and machine shop; size 100 by 200 feet; cost $20,000. For W. S. Guffey, a brick residence; size 40 by 60 feet; cost $12,000. For W. J. Prentice, a frame residence; size 40 by 58 feet; cost $11,500. For F. E. Moore, two two-story dwellings; brick, stone fronts; size 20 by 72 feet each; cost $20,000; contractors, Clark, Richmond & Co. For the M. E. Church Committee, a brick parsonage, 35 by 50 feet; cost $5,000.

Pueblo, Colo.—Architect G. W. Roe: For the Pueblo University, a three-story college building; size 153 by 118 feet; pressed brick with stone trimmings, metal roof; cost $75,000. Wallace & Davis, builders. For the high school building committee, a three-story school building; size 122 by 110 feet; pressed brick, stone trimmings, metal roofing; cost $80,000. For Messrs. A. T. Stewart & Co, a brick warehouse; size 50 by 140 feet; stone trimmings; cost $12,000.

Rochester, N. Y.—Architects Nolan, Nolan & Stern are designing for Mr. A. Adler a residence, to be built on University avenue. First story of brick and stone, second of shingles; steam heat and first-class plumbing and lighting; cost $15,000. Also for Mr. S. Adler, a similar residence. For Mr. T. S. Newell, a frame residence; shingled second story; to cost $8,000. For Mr. E. L. Adams, a colonial frame residence.

Architects Otto Block & W. H. Barnes have made designs for a three-story brick block for Mr. H. P. Langie, to contain stores and flats, fitted up in first-class style, with best plumbing, electric work, etc.; the exterior material will be wash brick and terra-cotta; to cost $13,000. For L. P. Squire, a $10,000 residence to be built on Park avenue; first story of stone, second of shingles; interior in hard woods, cabinet finish; all plumbing exposed and nickel-plated; heated by steam, indirect radiation; contracts partly let. For Mr. G. L. Reed, at Hornellsville, New York, a $6,000 residence; first story of wash brick, above that shingles. For Mr. E. S. Copeland, also of Hornellsville, a residence; first story of stone and brick, frame above; to cost $5,500. For F. G. Ranney, a residence; to cost $8,000; stone to first story windows, frame above; heated by furnace.

Architects Jay Fay & O. W. Dryer have prepared plans for a frame residence for Elbert S. Green; to cost $3,000. For C. E. Weidner, Esq., a frame residence; to cost $5,000. For J. W. Pressey, a stone and frame residence; cost $6,000. For Mrs. M. E. Fellman, a $3,000 residence. For Mr. George E. Ross, a Colonial frame residence, to be built at Holley, New York; to cost $7,000.

Mr. Frank Croston will erect, on the corner of Chestnut and Court streets, an apartment house; to cost $50,000. It will be 60 by 100 feet, five stories high, and contain thirty-two apartments; will be thoroughly fitted up and have all modern conveniencies, heated by steam and supplied with passenger and freight elevator.

Mr. Schuyler Moses will erect a block on the corner of North avenue and Hamilton place, to contain stores and apartments.

Excavations have commenced for the erection of a six-story annex to the Whitcomb House, which will be a commodious building, all built fireproof. J. Foster Warner is the architect.

J. W. Outhout will erect a six-story brick block at the corner of East Main and Stilkon streets, to be used as dwelling apartments.

Supervisor Ashton will erect a three-story brick block at the corner of Lake and Glenwood avenues; to cost $15,000.

St. Louis, Mo.—Architect P. F. Meagher: For R. J. Wilkinson, a two-story residence; size 20 by 71 feet; brick, slate roof and all modern improvements; cost $10,000.

The J. B. Legg Architectural Company: For C. H. Tyler, a three-story dwelling; size 30 by 72 feet; brick, granite and stone, slate roof; cost $12,000.

Architect John A. Quinn: For John Mullally, a two-story residence; size 50 by 54 feet; brick, stone trimmings, composition roof; cost $10,000.

Mr. P. Nolan will build a two-story brick dwelling; cost $5,000.

St. Paul, Minn.—Architect E. Strasburger: For John Christensen, a two-story frame residence; size 35 by 48 feet; cost $5,000.

Springfield, Illinois.—Architect George H. Helmle: For T. W. Currier, three-story and basement brick and stone store building, 35 by 157 feet; plate glass front; cost, $8,000. For D. A. Devares, two-story, eight-room frame dwelling house; cost $2,800. For Charles D. Roberts, remodeling store building, also addition, 24 by 50 feet; cost $3,000. For Baptist Society, Delhi, Illinois, frame church, stone foundation; cost $2,800.

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Death of Architect O. P. Hatfield of New York.

In announcing the death of Architect Oliver P. Hatfield, of New York, who has been known for so many years previous to the consolidation with the Western Association as the treasurer of the American Institute of Architects, the Institute has lost one of its oldest and most respected members. Mr. Hatfield, though seventy-two years of age, up to a short time before his death was hale and apparently in good health, holding at that time the chairmanship of the joint committee of the Institute and the National Association of Builders upon the uniform contract. His work upon that important committee did much toward the permanent establishment of a standard form. He was looked upon by both his professional brethren and the public as one of the most honored architects in New York. According to the *American Architect*, it must be nearly half a century since he went into business with his brother, the late R. G. Hatfield, under the firm name of R. G. & O. P. Hatfield. At that time, architecture was much less of a fine art than it is now, and the Hatfields found themselves led by inclination to the scientific and practical side of the profession, in which they soon gained a wide reputation. Mr. R. G. Hatfield, early in his career, wrote a book of extraordinary merit for the period at which it was published, containing rules deduced from experiments of his own, as well as those which had been made by Tredgold and Rondelet in England and France, accompanied by an immense amount of practical information. This book, under the name of the "*American House Carpenter*," passed through many editions, and is still popular and useful. Another valuable work of the Hatfields was the invention of what is universally known as the Hatfield Sheave, although the patent expired long ago, and the principle of it is used by a score of manufacturers. In the Hatfield Sheave, which was devised to meet the want of a frictionless roller for sliding-doors, the pin, or axle, of the sheave runs in a slot in the frame, the length of which bears nearly the same proportion to the diameter of the pin that the length of the track bears to the diameter of the sheave. Hence, while the sheave is rolling through a distance of perhaps a yard, the pin rolls an inch and-a-half in its slot, and there is no perceptible friction or wear anywhere, while the whole affair is very cheap. This apparatus was, we believe, patented in the name of R. G. Hatfield, but the thoughtful ingenuity which devised it was shared by both the brothers. Without taking a great part in original building, although New York owes to them some fine structures, the firm became widely known as experts and consulting architects, and were constantly called upon by their fellows in the profession, to whom they gave admirable advice and skillful service. Mr. R. G. Hatfield was almost the first, if not the very first treasurer of the American Institute of Architects, and held that post until his death, when he was succeeded by Mr. O. P. Hatfield, who retained the office, by repeated reëlection, until the consolidation of the Institute with the Western Association made it advisable to remove the business offices of the new body to Chicago. Personally, Mr. O. P. Hatfield, like his elder brother, was quiet, thoughtful, of measured speech, and considerate, but precise in action. Although the brilliancy of our modern makers of picturesque architecture has cast a little into the

shade the steady-going old offices which date from before the war, it has not totally obscured them, and some of the same brilliant artists will be the first to acknowledge with gratitude the kindness with which the Hatfields labored for years, by evening lectures and experiments, to instruct the New York students and draftsmen in the rudiments of building construction.

Columbian Exposition Architectural Exhibit.

The movement inaugurated by this journal in the direction of an architectural exhibit at the World's Columbian Exposition of 1893, comprising an historical exhibit of American building, an exhibit of drawings and models of existing or historical architecture of the world and as far as possible a historical display of building methods and appliances, has been taken up by the Illinois Chapter of the American Institute of Architects. A committee from the chapter called upon Director-General Davis, and was assured of his coöperation and the establishment of a bureau for the carrying out of these plans, offering to the Chapter the privilege of recommending one of its members for appointment as head of the bureau if the appointee met with his approval. The establishment of this bureau and the work incident to it should receive the most careful consideration, as the result will either be one of the most valuable and instructive of all the exhibition displays, or a costly farce that had much better never have been begun. The main work of organization should not be laid upon the local chapter alone, but should be supplemented by a strong committee of active workers appointed by the American Institute of Architects, and that body should make itself responsible for its success. The chief of the bureau should be selected for his reputation abroad and his popularity at home — we would suggest Prof. W. R. Ware, of Columbia College, if his services could be secured — and his official work supplemented by the enthusiastic support of every member of the Institute, the ethnological and archæological students of America, and through them the foreign societies upon whom much of the work of collection would devolve. Such an organization would mean success, as the time has come in the world's history for its architects to have placed before them not only present forms and methods but those of the past, in one grand and comprehensive display. If properly organized there is little doubt that suitable and ample space or even a separate building will be placed at the disposal of the architects by the exposition directory.

Reorganization of Supervising Architect's Office Probable.

There is more than a prospect, almost a surety, that the reorganization of the office of supervising architect of the treasury department will be effected at the next session of congress. Since we first agitated this subject and the form of reorganization proposed by us was incorporated in the Stockslager bill, in November, 1884, many other plans have been introduced from time to time, but with no profit other than the general agitation of the subject. Now the congressmen are "educated" in the matter as never before. They find the present office with about forty buildings under construction, another thirty or forty being planned and the remainder of the two hundred forty odd that appropriations have been made for, set aside because of the inability of the office to handle more work. The new Supervising Architect, Mr. Edbrooke, has oportunities before him in the buildings at Kansas City, Omaha, San Francisco, New York and other places, presented to no other supervising architect, the immensity of the work placed in his hands in mass and importance being greater than at any former period. It now remains for the American Institute of Architects to appoint a committee upon the reorganization of the supervising architect's office, or to reappoint that of the Western Association which disappeared at the time of consolidation, take up the work so well begun by that committee, and through consultation with the secretary of the treasury, the supervising architect and the congressmen, formulate a practical and comprehensive bill and secure its passage.

Progress of Columbian Exposition Work.

Within the past month the work in the office of the chief of construction of the World's Columbian Exposition has been mainly in preparing the plans of the several buildings to receive contracts. Proposals have been called for upon two, and the others will follow in rapid succession, so that by July 1, most of the contracts will have been let. It has been decided to add to those already planned, buildings for a forestry exhibit and also one for dairy products. These will be designed in the office of the chief of construction. The location of state and foreign buildings all in the improved section north of the main exhibition buildings is being fixed, the foreign section occupying a tract of over one hundred acres upon the lake shore, and commanding a view of the harbor, the naval exhibit and the fisheries building. This is the choice section of the entire grounds. The electrical people have made a strong effort to have the electrical building enlarged, but it was not possible, as any change would affect the entire plan.

Unwarranted Rise in Chicago Rents.

One phase of the approaching world's fair at Chicago which is already felt by the business interests is the ridiculous rise in rents. With no increase in demand to warrant it, business premises that were renting at $1,600 per annum are raised to $3,000, an increase of $1,400. Residences that were considered well rented at $60 are now raised to $125, and a longer lease than one year at this rate is refused. With no increase in population or business to warrant any such advance, the fact that a fair is to be held and that for a few months there will be an increased demand for sleeping quarters by visitors, and perhaps an increase in all lines of retail trade, makes such enormous advances absurd, as it always is to kill the prospects of trade by a prohibitory increase in prices for a common commodity. The result will be the scattering of business quarters and the removal of residences to the suburbs. Speculators will build cheap temporary structures to supply the demands of those who have been crowded out of more desirable localities, and the result will be a general loss of trade to the city. It is not too late to correct this error, which has for its logical result disaster, which, unfortunately for the city, will not only involve the guilty, but bring the entire city into disrepute. It is but just to state that in a majority of the cases investigated the property belongs to capitalists in other cities who have instructed their agents, who are only carrying out the order of their principals. The most enterprising yet conservative and prudent real estate board in the country is located in Chicago, and they owe it to themselves and to the city to move in this matter and see that no fictitious or "boom" values be placed on city property, knowing that the evil results in the future will certainly counterbalance any present profit.

Dwellings of the London Poor.

BY A LONDON ARCHITECT.

LONDON has had the reputation of being the richest city in the world. This might well be imagined by a stranger if his wanderings about the vast city were limited to what is called "the city," and such streets as Regent street, Oxford street, Bond street and the Strand in the West End. But as the knowledge of what the metropolis is beyond these limits is very small, even to the Londoners themselves, it would not be a matter of surprise if a casual visitor to this country, landing in the East End, were to exclaim that in all his journeyings on the face of the earth he had never seen such poverty as that in London.

Vast districts lying east of the city, such as Whitechapel, Bethnal Green, Mile End, Stepney, Poplar, Limehouse, towns in themselves, are inhabited by thousands upon thousands of the poorest and most wretched beings that could possibly congregate together.

As a living example of the degraded and immoral state of these districts, the whole world has been struck with horror again and again by the foul and filthy murders which have, from time to time, been perpetrated in the East End of London. The very appearance of the inhabitants is different from that seen anywhere else in the metropolis; faces pinched with poverty, with a semi-brutish leer, drunkenness and vice depicted in every feature.

The dress is of a very different style to that ever seen elsewhere, for even among this poor class a certain fashion prevails, which leads one to believe that he is in a foreign country, miles away from London town, although all the while he is but a few minutes walk from the seat of wealth and luxury. Why does this state of poverty and vice continue? A difficult question to answer, and one bearing upon a much deeper social problem than I care to enter into here. But what remedy is there being applied to diminish this degradation and want among our fellow creatures? Much is being done, but for all that the question is yet far from solved. Much of the evil instilled into these poor Londoners (and there is no poorer being under the sun) is due to the filthy habitations in which they are forced, through their poverty, to live, and to the overcrowded state of the districts in which they manage to eke out an existence. Whole families are crowded into one small room, often but an underground cellar, in such a ruinous state of repair and filth, that no good man would allow his dog to use it as a kennel. Parents, grown-up sons and daughters and children, live, eat and sleep all in one room, the windows of which are never open. Streets upon streets of small houses exist huddled together almost without light or air, inhabited by hundreds of thousands of these poor people. How they live at all seems a great wonder, as many of these houses are totally unfit for human habitation; windows smashed and papered up, ceilings of nothing but bare laths, rain pouring in from holes in the roofs, darkness and dirt supreme.

In order to deal with this national disgrace, a bill was passed by parliament, known as the "housing of the working classes act, 1890," by which local authorities have power to deal with unhealthy houses either in groups or separately. Part I of the act deals with groups or insanitary areas of sufficient size to constitute metropolitan improvements. Part II refers to unhealthy and obstructive houses; houses under this section which are unfit for habitation, either empty or occupied, may be closed by the local board, and if not rendered habitable, the board may order the houses to be demolished. The local authority may purchase the land and dedicate it as an open space, or sell it for suitable dwellings for the working classes. Part III of the act provides that the local authority may acquire lands for the purposes of building, or letting or leasing for building lodging-houses for the working classes. The London County Council, acting under Part I of the act, have resolved to deal with a large area in Bethnal Green of about seventeen acres, one of the very worst properties in London, by razing the whole of what has been rightly termed "the pestilential district" to the ground. New streets will be formed and new buildings erected, ample and suitable accommodations for healthy dwellings with all the sanitary provisions for light and air, two essentials to health. This improvement is to cost $2,000,000, but the medical reports show how urgent is the need of the abolition of these hovels.

Dealing with an area already rendered unhealthy by overcrowding, it is a difficult question how to reduce the number of persons upon the site to make things more healthy, and a still greater difficulty how to lodge the inhabitants during the process of demolition and rebuilding. To overcome this to some extent, the London County Council have resolved to deal with such large areas as that at Bethnal Green in sections. A certain proportion of the persons on the site must be dishoused, and, in order that surrounding districts may not be overcrowded, they must find shelter elsewhere. This will drive numbers into the nearer outlying suburbs, from whence they must reach their work by train. Villages or small townships have already arisen in various outskirts of the metropolis, erected under the supervision of the Artizans' Dwelling Company. Here comfortable and healthy houses can be obtained, in addition to the fresh air of the suburbs, at a low rental.

But it is only the better class of artizan who can afford to live out of town, as, unless the railway companies are subsidized, the fare will prohibit the East Ender from taking advantage of such provision. It is, however, very satisfactory to know that the select committee appointed to inquire into the Central London Railway bill insisted that workmen must be carried the whole journey of six miles for one penny. The company will therefore have to run three trains a day each way, the fare for the whole distance being one penny, and for intermediate distances one-half penny per mile. This will be a great benefit in many ways for the poor, as it will enable many to live in better air.

A conference has lately been held of the medical officers of the various local boards and vestries, under the invitation of the medical officer of the London County Council, at which was discussed the condition or defects which would render a house either permanently or temporarily so dangerous or injurious to health as to render it unfit for human habitation within the meaning of the housing of the working classes act, 1890. The following is an extract from the report made by the conference.

"Whether a house is dangerous to health mainly depends upon:

"(*a*) Site and surroundings;

"(*b*) Construction;

"(*c*) Age and general want of repair;

"(*d*) Nuisances.

"(*a*) SITE.—A dwelling-house built in a hollow or in a situation not admitting effectual drainage, or exposed to malarious influences, or built in a manner or on soil which causes or permits the air to be contaminated by injurious gases, might be properly represented under section 30 of the 'housing of the working classes act, 1890.'

"The fact that a dwelling-house is built on a site so surrounded by buildings that access of sufficient light and air is impossible, would in our opinion be a good ground for representation.

"(*b*) CONSTRUCTION.—Under this head would be classed original defect of plan; for example: a dwelling-house improperly ventilated or lighted, or with closet and dustbin so situated as to cause a nuisance within the house.

"Any condition which results in permanent dampness.

"Such faulty construction of chimney flues as permits products of combustion from adjoining premises to permanently contaminate the air of living rooms.

"(*c*) AGE AND GENERAL WANT OF REPAIR.—This, when it reaches a degree of dilapidation, is obviously a just cause for representation.

"(*d*) NUISANCES.—Bad drainage, faulty closets, filth *per se*, etc., are in our opinion grounds for action rather under the 'nuisances removal and sanitary acts'; but when affecting a whole dwelling-house or when combined with faults of site and construction and general want of repair, they justify action also under the 'housing of the working classes act.'

"In all the above cases the question of 'degree' comes in; it is, indeed, this question of degree that renders precise definition impossible; general principles can alone be laid down."

This report will, I think, explain the meaning of the act clearly.

Many other areas much smaller than the Bethnal Green area are being dealt with in the metropolis under part II of the act, where houses from the number of six to sixty are being demolished and replaced by artizans' dwellings. At the end of last year the council invited architects to submit, in competition, plans of a municipal lodging house capable of accommodating 320 men with the usual requirements of a common lodging-house, including a common kitchen and a sitting room, the charge per lodger being four pence per night, for the poor waifs who have no homes, not even an underground cellar to go to. The full schedule of the accommodation required may be of interest, so I venture to give it *in extenso*:

"Sleeping-places for 320 men, containing a minimum space of 350 cubic feet per person.

"Accommodation for two or three wardens or night watchmen.

"Sitting-room adapted for use as reading-room and for entertainments.

"Dining-room with open fireplaces and kitchen with hot plates or other suitable means of cooking food by the lodgers.

"Scullery placed conveniently for serving out cooking utensils.

"Grocery, bar or shop.

"Office to have good command of rooms used by day, particularly of entrance, staircase, day-room and dining-room.

"Lavatory with fixed basins.

"A place containing say four or five baths for occasional use, and say twelve troughs for feet washing.

"A place for washing and drying clothes by the lodgers generally, and for drying wet clothes after rain.

"Water closet and urinal accommodation generally.

"Water closet and urinal near dormitories for use at night only, two or three in all.

"Washing-room (for the use of the establishment) with drying closet.

"Conveniences for washing foul linen.

"Ironing-room.

"Store for clean linen.

"Disinfecting chamber for beds and clothes.

"Boiler-room.

"Coal store.

"Store for utensils.

"Caretaker's rooms, consisting of kitchen, sitting-room, two bedrooms, pantry and water closet. If in basement the ceiling must be at least twelve feet above street level.

"Water closets for the men and women servants.

"A yard at the rear for ventilation and occasional exercise; this must not be less than 450 feet superficial."

To this invitation seventy-five architects answered, and 560 drawings were submitted. The council's architect and the president of the Royal Institute of British Architects were appointed the assessors in the competition, and granted the first prize of £100 to Messrs. Gibson & Russell, of Old Bond street, the other premiated designs being by Messrs. Williams & Hopton (£40), Chorley & Cannon (£30), and Lock & Worthington (£30), all London men.

A short description of how the requirements were carried out in the winning design may not be out of place.

The dining-room is placed at right angles to the street, running from front to back, the kitchen being placed in part of the space behind the dining-room. At the back of the building, in a long range of rooms, are the lavatories, wash-houses, etc. An open yard is provided in the center, affording light to the back portion of the dining-room and cutting off the lavatories from the living rooms. The dormitories consist of two high blocks running from back to front, and are so arranged that galleries are provided instead of floors above the ground-floor level, thus leaving a large open space of air from the ground floor to the roof, and leaving one large hall with galleries in lieu of dividing the space up into several floors; this appears to be a most excellent arrangement. Each gallery is surrounded with small cubicle partitions, which are not carried up to the roof, so that a free current of air is provided to each cubicle. The ground upon which this building is to be erected was cleared of the worst kind of common lodging-houses, so that it appears a wise measure to erect one under municipal supervision in place of the private houses which have been demolished.

The benefits of this act dealing with the dwellings of the London poor go even further, as not only is it a provision for the poor themselves, but a check to the spread of disease and epidemic among the community at large. From overcrowded and unhealthy dwellings originate many a scourge that penetrates into the healthier quarters of a city and is even carried into other countries.

Among other employments a large population at the East End is engaged upon the manufacture of clothing, which forms a ready means of conveying contagion all over the world.

It is to be hoped that the local and other authorities empowered to act will not lapse after the first outburst of enthusiasm into a state of inanition, but will remember that the state of the poorer classes dwelling in hovels in the East End of this wealthy city is a national disgrace which they have the power to remove.

ARCHITECT C. POWELL CARR, of New York, known to the members of the Institute as the gentlemanly representative of *Architecture and Building*, of New York, having resigned his position as associate and art editor, will open an office in the Lincoln building, on West Union Square, where he may be consulted upon all matters pertaining to architectural engineering, particularly in the line of roof trusses and heavy foundations. Mr. Carr having recently been elected a member of the New York Chapter of the Institute, his presence will still add to the enjoyment of Institute meetings and its deliberations will be strengthened by his counsel.

Scenic Art.*

BY ERNEST ALBERT, CHICAGO.

MR. PRESIDENT AND GENTLEMEN OF THE CHICAGO ARCHITECTURAL SKETCH CLUB: Some time ago, when asked to contribute a paper upon scenic art, I avoided assuming the full responsibility of being here by refusing, but Mr. Wagner and later on your president, Mr. Williamson, settled the matter by announcing me for May 4. Therefore, to whatever extent I may fail to make myself understood, or to do a large, full-grown subject justice, must be directly brought to their doors, and I must be forgiven, with perhaps the injunction to go and sin no more.

Scenic Art—what is it and how is it different from any other art? I ask this for the reason that until of late years it has been, by the great public at large, as well as to many of the gentlemen engaged in its execution, an unknown quantity. Time was when, unused to the perfect mountings now given to plays and operas, the public took little or no heed to their scenic environment, other than to perhaps note a tawdry, inartistic something, which for lack of better thought filled the bare necessity of enclosing the actor from the bare and grimy walls. When the play—ah, the play was the thing, and anything beyond the play in the way of artistically housing it, was not only unknown but unnecessary. Those were the palmy days of the drama, when the art of the actor was considered sufficiently strong to render superflous the aid of the painter—the palmy days, when the villain wore long hair and a velveteen coat, and put in his time equally between clutching a dagger and showing his teeth, but to-day how different it all is! That same villain is often the best mannered man in the house, faultlessly dressed, a Chesterfield who, when things fail to altogether go his way, simply smiles, murmurs "My time will come," and bows himself off the left upper entrance. Today the tawdry something that once surrounded the players is modern decoration, if an interior; and an artistically painted scene, full of the atmosphere of nature, if an exterior. Conventionality is no longer our goal. Nature is now the goddess to whom the mirror is held aloft, and the authors, managers, actors and artists that have, through their love of the correct, succeeded in even partially reflecting the glorious glow are the men and women that today stand in the front rank of their several lines of work, and receive the best approval of a cultivated and critical public.

Scenic art is therefore, as known today, different only from other studio art in its breadth—a mere question of scale. The picture painter is no more artistic in his work than is a thoroughly good scenic artist. When one portrays nature truthfully it matters not whether it be on a canvas of eight inches, or of eighty feet. The mistake comes in people walking up too closely to a fragment of scenery, and receiving the impression of breadth; they invariably make some original remark as: "Distance Lends Enchantment." Scene painting is not necessarily a coarse art because you cannot read a square yard of a scene seventy by forty feet at a distance of a few feet. The distance at which to judge a picture is that sufficiently far from it that the eye may take in the entire subject. At that distance scenery must also be judged, and with that test applied a well and carefully painted scene will be found not only as finished as the majority of pictures but even more so. Of the quality of finish nothing need be said, good, bad or indifferent, but this: that when it falls short in finish and detail, it is either owing to a want of knowledge in the painter or lack of time, certainly not in accordance with any principle of stage painting.

Having mentioned a few of the things it is not, I will say a few words in excuse of what it sometimes is. In a comparison between ourselves and the picture painter, I think it must be allowed that we scenic artists are considerably handicapped in our chances of acquiring special excellence in any one direction. It must be remembered that the picture painter in most cases spends a lifetime in studying one class of subject and often but one aspect of that subject. One man gives an almost perfect representation of the mountain peaks, another a charming rendering of the seashore with its sand wet by the incoming surf and reflecting the twilight's glow; still another a hilly slope with its straggling sheep. Many of these men have not, for an hour, turned their attention but in one direction—one thing thoroughly and one only. Ask the marine painter to paint a cathedral, an ancient street, or a modern drawing-room, and in all probability he would tell you he never did architectural work in his life, and knows nothing about it. Ask the architectural man for a drawing of a storm, or a sunset at sea and the offer would be refused. Not so with us. We must do or try to do any commission that is offered us; although not beggars in the nature of things, we cannot be choosers. The play is not suggested by the painter; he receives it from the dramatist. You will therefore readily see the field he must cover, and perhaps admit that to be acceptable in most things and strong only in one or two, entitles him to consideration. Did it not, he would be glad that, with his few merits, his many faults are soon forgotten, for time, repainting or an occasional fire soon obliterates all traces of them. Our knowledge, archæological, artistic and mechanical has to cover so large an area that our shortcomings sometimes seem really excusable. The concentrated forces of a picture painter's energies and tastes cut by their very concentration a deep channel for themselves and he becomes a recognized interpreter of the subject he has made his specialty. Again, with us a thing is not done when it is finished, but when it is wanted. Time, with the announced production, waits for no scene painter. We cannot alter. We must go on. The mere replacing of a big canvas on a frame perhaps thirty by fifty feet means the expenditure of time, trouble and money. The scene painter is nothing if he is not certain in his execution, and the finest artist, if uncertain and unpunctual in his work would be useless in a theatre.

*Paper read before the Chicago Architectural Sketch Club, May 4, 1891. Revised by the author for publication in THE INLAND ARCHITECT.

But with all these drawbacks, scene painting as a school has proved itself a good one; witness very many good men who leaving it have made as great reputation in picture galleries as in the theater — De Loutherbourg, Stanfield, Roberts, Pugin Allen and Leich — and in latter days J. Frances Murphy and Charles Graham.

Stage painting is in no way a false art because it is shown by artificial light. A picture painted for the gallery suffers more from gaslight than our work does from daylight. Indeed, a well painted cloth (a technical term for a scene painted on a single surface) will look better when stretched on a frame and lighted by the brilliant skylight in the big painting rooms than when hung, lighted by the indifferent lights of the stage. We must avoid powerful greens, which become coarse; strong blues, which become black, and exaggerate our yellows, which are robbed of their strength by the gas, and we must paint solidly. Thin distemper, like thin oil color, always looks poor.

In the age of Elizabeth, during the great epoch of dramatic achievement, no attempt was made at scenic illusion. The stage was almost bare; properties and costumes were few and simple; painted scenery was unknown; tapestry-covered screens marked the entrances and exits; locality was indicated by a placard bearing the name Rome, Venice, Genoa, as the case might be; a canopied seat, a bed, a table, with tankards and flagons, were all that was required to represent a throne-room, a chamber, or a tavern; the fixed wall at the back of the stage, a maid-of-all-work accessory, serving any and all occasions, stood for Juliet's balcony, the Bridge of Sighs, or Brabantio's house. The court gallants, the rough sailors and the townsfolk who crowded the cockpit of the Globe did not need the aid of scene painter and costumer to make the creations of their dramatists real and living.

In the sixteenth century daily life had a splendid setting; religious and civic ceremonies, public sports, wars even, were pageants. The citizen was himself an integral part of those splendors; he walked in the procession, knelt in the cathedral and wore a glittering costume to the war. The world was young for the second time, and to these men a few words of description were as fire to tow.

In the past, simplicity was natural to the stage; beauty, pageantry were parts of daily life — the theater needed but to suggest them. Today "No longer able to be an actor, he desires to be a spectator" of the picturesque, for in our time pageantry has been shifted from daily life to the stage. The man of the sixteenth century, having it in his city, his dress, and his home, did not need it at the theater. We have reversed these conditions. With our civilization of mechanics and the exact sciences, life has grown dun, and civil-suited. The Puritans themselves would wonder at the plainness of our daily attire. Processions have all but disappeared; court ceremonial has been simplified; and color abandoned even by the peasant and by the soldier. Taste, beauty, historical accuracy, and general completeness — together with unlimited expenditure in their attainment — seem to be the leading characteristics of stage art today. A realism undreamed of by our fathers, a correctness unhoped for by dramatic students and lovers of art, have distinguished the theater of the latter half of the nineteenth century. The productions of ambitious, art-loving managers of the recent past were indeed sometimes "grand" enough to compare, both for elaboration and spectacular effect, with the finer stage pictures of today, but they were fitful in their occurrence, and the theater could in no sense lay claim, either in point of finish or in the exercise of ingenuity, of expenditure, or sustained effort, to the style and conscientiousness that nowadays attend the production of nearly every form of dramatic entertainment. What the result of this combination of play and spectacle has been, or is likely to be, we need not now inquire, but it will be readily conceded that to no man, living or dead, is so much credit due for the consummation of the union as to Mr. Henry Irving. Liberality and taste have invariably lent distinction to his productions, which have usually been placed in expert hands untrammelled with thoughts of cost; while a wise managerial discretion has given unity to the whole. When Mr. Alma-Tadema, Mr. Seymour Lucas, or some other well known artist of antiquarian knowledge and instinct, supplies the designs for the dresses, when the scenery is furnished by Mr. Telbin, Mr. Hawes Craven, or the more eminent of their brother-brushes we may be certain of accuracy and beauty.

The more we have seen on the American stage since the first visit of the Lyceum Company, the more we feel it necessary to insist upon sobriety, sobriety and again sobriety. It was because Mr. Irving's settings were so harmonious, so artistic, — above all, so carefully and faithfully thought and reasoned out, — that they were so good. Occasionally was heard the cry go up that the play was lost in the setting, that the painter had rendered indifferent the playwright. In some cases this may be true, but a fine setting cannot belittle good poetry. It may be too gorgeous; it cannot be too good. It is here that the public are often wrong. They judge correctness by their own surroundings. This makes important the fact that it is the quality of novelty which makes fine setting distracting to many persons. Once thoroughly accustomed to good and correct scenery and costumes, they will cease to be unduly occupied by them. When Garrick and Talma made a few innovations, it is probable that even such simple alteration as discarding the bag wig disturbed old playgoers. Today the public are willing enough that the painted Arden shall be leafy, and beautiful Rosalind is not the less so; they are familiar with the loveliness of a forest. Theodora's surroundings are rich and striking, and they say it is scenic and distracts them from Bernhardt's acting. They are simply unaccustomed to Byzantine architecture and decoration.

The pictorial part of the production of a play may be continued in the painting of the scenery, the construction of the costumes and the properties, and the combination of all into stage pictures. Theatrical settings are to a considerable extent governed by the same laws which control the execution of easel pictures, harmony of color, agreeable distribution of the masses, groups and lighting, as in a composition upon canvas; recognition of the pictorial principle that simple central objects will bear an elaborate background, and that an intricate foreground needs simplicity behind it. In a few words, the relief which is given to the principal roles, by their inherent importance and the superiority of the actors filling them, may be greatly enhanced by purely pictorial means of color and lighting.

The stage, properly speaking, is that portion of a theater which can be seen from the auditorium, and the space on either side, behind the prosecenium. The stage is, widthwise, divided into five parts. The side to the extreme left of the spectator is called the prompt side. The prompter stands there in theaters in which there is no prompter's box. Halfway between the prompt side and the point which marks half the width of the stage is the prompt center. Then there are the center proper, and, corresponding with the prompt center and prompt side, the opposite prompt center and the opposite prompt side, or, as they are always called in theatrical parlance, the "o-p-center" and "o-p-side." The depth of the stage is divided into "entrances" according to the number of wings. Thus the "first prompt entrance" is between the proscenium and the first wing on the prompt side. Corresponding with it on the opposite side is the "first o-p-entrance." All these divisions and their appellations hold good not only of width and depth, but also height. For instance, the prompt center extends from the floor of the stage to the beams far above — a height of sometimes of 100 feet — to which are attached the pulleys and huge leverage wheels for running the ropes that are used to lower and raise the drop scenes.

Everything above the proscenium arch is summed up in the term "flies," a word more frequently misused than any other theatrical term. The uninitiated almost invariably use this term in speaking of the strips of canvas painted to resemble sky, foliage, arches, or the ceilings of interiors suspended across the stage above the wings. These are the "borders" and form but a small portion of the flies, which include the border lights, innumerable ropes, cleats, pulleys, the beams to which these are attached, and the fly galleries on either side, from the lowest of which the drop scenes and borders are worked. These galleries vary in number according to the size of the house. In opera houses of the first rank they are four in number, so that the flies are four stories high. Then, from the prompt side across to the o-p-side, stretch, a story higher, the beams already referred to. These in the aggregate have two names, according to the position of the person speaking of them. Looking upward from the floor of the stage, he would call them the gridiron; standing on them he would speak of them as the rigging-loft. The drops in large houses are about fifty-six feet high, and as they are raised, not rolled up, the space from the top of the borders, on a line with the first fly gallery, to the gridiron is about eighty feet high, giving room for the drop and twenty-four feet of rope. There are five ropes to each drop, the prompt, prompt center, center, o-p-center, and o-p-rope. These run from the gridiron down to the first fly gallery, where they are fastened around cleats and from where they are worked.

While the floor of the stage runs from the footlights to the rear wall of the building, the entire depth is rarely utilized, because a section extending about eight feet forward from the rear wall is reserved for the paint-room. The floor of the paint-room is a platform called the paint-bridge, which extends across the stage. The canvas to be painted having been hung in position so that its top is level with this gallery, the work of painting begins, the frame being raised and lowered as occasion requires. Until within about a fortnight of the production of an opera or play the work of preparation goes on in the building on either side of the stage and flies, and it is not until that seemingly late period transferred to its proper position.

At the production of the work the audience, comfortably seated, watches the performance unfold itself so smoothly that it suggests no idea of preliminary labor. This is as it should be. For as an actor must cause the result of his art to seem nature itself, so the theatrical manager must cause the action and its scenic surroundings to appear the spontaneous product of the time in which the drama or opera plays. We are apt to credit only the actor with the genius of simulating nature. As a matter of fact, the principle upon which he proceeds governs every detail of a theatrical production. What the actor strives for, the manager, stage-manager, scene-painter property-master, gas-engineer, master-machinist, musical conductor and chorus are striving for. Each in his respective department is endeavoring to *simulate* nature. I emphasize *simulate* because the simulation of nature as distinguished from the actual reproduction of nature is the peculiar province of stage art. It is a fact that a real tree upon the stage looks less like a real tree from the auditorium than a tree painted upon a piece of canvas; and that with a bit of canvas and a little paint the scene-painter can, at the expense of a few dollars, produce a Persian rug looking costlier and more like the real article than would an actual Persian rug costing a thousand dollars. What in real life would be an exaggeration becomes on the stage perfect simulation of nature. The actor's natural bloom would be a ghostly pallor in the glare of the footlights, so that he is obliged to rouge his cheeks in order that their color may look natural. And as in this case the look of nature is produced by exaggeration, so it is with every thing pertaining to stage art — voice, gesture, costume, scenery, "properties," light-effects. They must all, so to speak, be rouged and roughened. A stage production, to be successful, must be prepared with this principle always in view. It can easily be traced through the work going on behind the scenes of an opera house.

When Napoleon III, before declaring war upon Prussia, asked one of his ministers if everything were in readiness for the army to move on Berlin, the latter replied: "To the last button on the last gaiter." Unless everything pertaining to an operatic performance is

in readiness to the last papier-maché shield for the last "super," there will be an operatic Sedan.

The stereopticon plays an important part in modern scenic productions, and many realistic effects are due to its introduction. This is notably the case with lightning, clouds, and the rainbow. Before the use of this apparatus, lightning was produced by simply flashing magnesium powder in a pan. The powder is still flashed, but the image of the lightning is thrown upon the back drop or other portions of the scenery with the stereopticon. The effect is heightened by having various portions of the scenery painted on some transparent substance and flashing a light behind them, so that as the forked lightning plays over the scenery these portions seem luridly illumined by it. Cloud effects are produced in the same manner, the image being usually thrown upon gauze drops.

Lightning implies thunder. The old theatrical device for imitating the artillery of the storm was to shake a sheet of iron. This is now almost obsolete in theatrical establishments of the first rank. The so-called "rabbit-hutch" has been substituted for it. This contrivance while far more complicated is also far more effective than the sheet of iron. On one side against the wall of the third fly gallery, prompt side, stands a cabinet with six slanting shelves closed by doors which open sideways toward the wall. On each of these three shelves are half a dozen cannon balls prevented from rolling out only by the closed doors. From under the cabinet runs a broad zinc-lined trough, which, at a distance of about eighteen feet from the cabinet is led through the flooring and then in two long slants to the floor below. At short intervals in this are little inequalities of surface. A rope places one of the two men who work the apparatus in communication with the stage. Suppose there are to be two long, loud rolls of thunder. The stage manager pulls the rope, the man at its end on the second fly gallery gives the word to the man at the cabinet. He throws open the doors of the lower three shelves. Eighteen cannon balls roll thundering down and through the floor to the end on the floor below. When the second signal is given the balls on the other three shelves are freed with the same effect. If only three or four balls are used, the sound resembles the rumbling of distant thunder, while a short, terrific peal can be produced by freeing the thirty-six balls before they pass through the floor.

The apparatus for producing stage wind is one of the few old-time devices still in use. It consists of a paddle wheel, the paddles scraping against a piece of corded silk tightly drawn over the upper part of the wheel. The imitation of wind thus produced is very natural, the sound increasing in volume as the wheel revolves more rapidly.

The moon effect, if stationary, is of course a circular transparency on the back drop. Starlight is either small jagged holes in the same cloth, illuminated from back, or spangles sewed loosely upon the face of it. As for the ripple upon the water immediately under the moon's rays, that is produced by cutting below the surface of the horizon a series of irregular slits in the cloth, behind which is a continuous towel worked with windlass around rollers, and in which are more of these jagged cuts, a row of light in the middle of the towel making the light effect. This, when properly handled, gives the impression of moonlight on the water as if reflected from above.

The sound of rain is closely caught by a great circular box about five feet in diameter and ten inches thick. This is made of pine and closed entirely from side to side. Through this is then driven many thin strips of oak; about a quart of white beans are put into the wheel, which is then hung up over the fly gallery and can be revolved by the prompter simply pulling a rope. The noise made by these little Boston delights falling through the wooden sticks and rebounding from side to side of the revolving wheel suggests to the audience the urgent necessity for an umbrella, while to the man pulling the rope, it more probably suggests brown bread.

A fine effect in sound is that of the surf rolling up upon the sand and made by a large flat box covered with Manila paper, and in which about a pound of shot is gently tilted from side to side.

From the gallery on which the wind machine stands, one can look down upon the stage and over the footlights and orchestra and into the auditorium. There sits the audience, gazing upon a scene which to them has all the seriousness of reality. And this appearance of reality is produced by the numerous artificial devices of which we who are behind the footlights have knowledge. And yet the next time you sit in the audience, you will be as much absorbed in the action as though you knew nothing of the means employed to dupe you. For scenery, properties, costumes, and lights have been devised with the grand principle in view, the simulation of nature.

And now as to the lighting, the incandescent has done much for the stage. Its full steady glow is, when run at the proper capacity, equal to gas, while its great advantage over the latter is in its safety. With it we are enabled to place lights where formerly we could not, such as close to nets and gauzes and hung around in groups, or running along in pliable and brilliant lines of illuminating force upon the back of tree limbs or perforated set pieces of slender proportion. Great is the incandescent, and already broad is its field. The arc light is not used upon the stage for general illumination on account of its too intense shadows.

While there are in this country perhaps thirty or forty scenic artists of different grades of ability, there are not over ten or twelve who are entitled to hold front rank. The others simply drifted into the business and are the men, who, through their lack of study and indifference to the progress of our time, have done so much to retard the rank of our profession; men whose only claim to artistic capacity comes with no intention or fault of theirs through their having been born, as my friend Burridge would say, with palettes in their mouths.

After getting from the author a description of the play, we make the small models, such as you see here. We then submit them for approval, often having to alter slightly here and there to make more or less space for action. We then give the small pieces of cardboard to the carpenter who makes the framework as it is marked on back and has it covered. He then puts it on the paint frame, and after an assistant has given it a coat of priming, it is ready for us. To begin on this is done by roughly sketching in charcoal the enlarged form as upon the model. This is carefully gone over with ink and all the details impossible in the model carefully put in. The charcoal is then dusted off and it is ready for the painting. Of course, being in distemper and therefore drying quickly, it is sometimes lively work with the blending of a sky, if it be an exterior, as the laps of color show if partly dry, thus destroying the atmospheric effect. We seldom like interruption when engaged upon this portion of the work, as rapidity and plenty of room is necessary. An artist usually begins the sky looking like a gentleman, and emerges from the fray sometimes triumphant, but often otherwise, looking like a calsominer. I am reminded of one of those little stories that follow every profession, always more or less truthfully, but which will demonstrate what I have been saying in reference to skies.

In the Boston Theater the artist for years has been Mr. William Getz, an old-timer, with all the conventional methods. Messrs. Thompkins & Hill were the managers. They had already postponed the production of a new play for two weeks on account of Mr. Getz not being ready with the scenery, and as the play then running had long since ceased to be a paying investment, they were wild to get it off and the new one on, feeling that in it they had a bonanza. Mr. Thompkins was, therefore, in a wicked state of mind when one morning he went upon the stage to see if they were safe to announce the new play for the coming week, so calling that terror of the masher, his old joblots, the stage doorkeeper, he told him to hie him up the dust ladened spiral-formed stairs and ask of Mr. Getz if he would come down and have a little talk with him, the manager. So his old dealflets climbed and climbed away up into the gloom, and after many pauses in which to catch his truant and beer-laden breadth, told Mr. Getz what Thompkins had said. Getz, who was wildly juggling a cerulean blue and chrome yellow blend, frantically waved an eight-inch brush at him, and yelled "You tell Mr. Thompkins that I wouldn't come down if my mother was dying! I am laying in a sky." Imagine then the effect upon the already overwrought Thompkins, when his messenger finally returns and says: "Mr. Getz says his mother's dying and he's lying down to cry."

The model of tropical scene here is the work of Richard Marston, of the Union Square theater and Palmer's theater, and was made about eighteen years ago when the play of the "Wicked World" was produced.

The model of the Orchid is by Homer Emmons, of New York, and for the play of "Blue Jeans" now being produced by Mr. Burridge at McVickers. The wood interior is by Mr. Walter Burridge for his beautiful production of the "Rivals" lately done by Mr. Jefferson at McVickers. The flat sketches are some I did for Booth and Barrett. They are what we term front cloths, and are used while the carpenters are changing scenes at the back. The model here, or parts of it, the balance being lost, strayed or stolen, was one of my scenes for the "Merchant of Venice" production for Booth and Barrett. I regret not having saved a model of my transformation scene in the "Babes in the Wood" at the Auditorium, for that, even while roughly put together, was different from these in its being spectacular, and might perhaps have been of interest to you. The flat sketch on the wall is a bit by the late Matt Morgan, one of the greatest painters in distemper we have ever known.

Now, in reference to stage construction; as it is probable that every member of your club will some day, sooner or later, be called upon to construct a theater, I purpose to tell you what architects invariably do and in what they fail. This as the result of twenty years of study and work on the stage.

The architect designs his building with its noble façade, its symmetrical lines, its spaces of repose; he then gets into the interior and by carefully observing the precedents already established, is successful with his sight lines. His balcony curves are beautiful. He takes his chances acoustically and gets down as far as the boxes. These he carefully considers, being particular that they do not mar the graceful lines of the whole. He then binds about his head a towel and retires to think, and from that communion of though and dampness, that successful combination of brain and water, arises gradually but grandly the proportions and detail of a proscenium arch and sounding board that will be at once a novelty in construction and a decorated dream. So far he is usually a success and it would be presumption on my part to criticize his work. I do not, I cannot. I have only admiration for it. But it is right here upon reaching the proscenium arch that he should go out and see a good old-fashioned game of baseball. That certainly would be beneficial to his health and not detrimental to the theater; but he does not. He wants to; but struggles with himself; he says, "O, no; no baseball, I was almost forgetting the stage! that wont do. I must have a stage." In fact, he cannot recall a single theater that had not a stage, and so, full of hope and the ambition to conquer in new fields, he steps up out of the private box and on to the apron of the stage. He rather likes it and turning for a look at his house he fills up with pardonable pride as he notes balcony after balcony rising in graceful lines to the ceiling, the nice arrangement of aisles, the beauty of the boxes and the proscenium arch, and then turning again, he looks into that great space and with a courage that is sublime and the simplicity of a little child, steps through the arch and over the footlights into an unknown world, and it takes him just fourteen seconds to fall through the vampire trap into the sub-cellar, where he is found some hours later with his clothes torn from his back, badly battered, but evidently still in the ring, for you hear him asking the scrub woman if flies are still used in theaters;

if the Hamlet trap is over the gridiron; or if the left upper entrance is on the fourth floor. Emerging, therefore, from mistake No. 1, he loses no time in looking for mistake No. 2. Says: "why, of course, funny I should not think of that at first; the stage carpenter, he is the party I want. I will put all this stage business in his hands and go and see the ball game." So he calls in some antique with whiskers under his chin, who has been rendered round-shouldered by conventionality, who remembers distinctly the night that Forrest played "Metamora." Ah, that was a night! He was the boss carpenter then as he is now. In fact, he goes with a lease; a man that has not learned, or what is worse, has not unlearned a single thing in all these forty years. The architect gives to his own part of the work the result of his best knowledge, applies to it every modern improvement, does all he possibly can to make that theater stand for all that which is best in construction, seating, lighting and decoration. In a word to make this a house splendidly typifying the progress of his time, and then, ignoring entirely the man to whose poetical brain and practical brush the public must look for the pictorial part of the productions of that stage, he gives the work of constructing it into the hands — I cannot say brains — of a man whose only ambition is to make it as they made them when he was a boy. And he straightway puts up a set of grooves. They have not been used for twenty years, but that does not matter, he gets them up and there they are, a death blow to the painter's picture, a standing, or rather hanging menace to perfect illusion.

There was a fight made against them ten years ago so strong that it called into existence the only improvement made of late years by these gentlemen. They set up a howl against any such desecration of a time-honored, moss-covered custom, saying: "What! do away with grooves! why, how then shall we run flats?" So they finally evolved the idea that they would put flap hinges on the grooves in the middle and fold them up a few feet more out of the way. A flap hinge, there was, although so heavily encrusted with brilliancy as to render calciums unecessary and so completely ornate as to absolutely compel admiration. A flap hinge. And that gentlemen, represents the sum total of the progress made by these gentlemen in the past ten years. You occasionally see some play in which some clever bit of mechanism is introduced and you read the following morning of the great credit due the stage machinist for his brainy work. I cannot recall in my whole experience, and covering many of these supposed mechanical giants, ever wanting a little trick or movement out of the conventional that I did not have to show them how to work it.

Some time ago Mr. Burridge designed a scene from the "Noble Rogue" calling for the turning of Clark street bridge and allowing a vessel to pass. He schemed it out and then brought forth his model. The claim was immediately made that it would not work. Was not practical. But he made all the detail drawings, and a working model of the swinging bridge. It was built, worked successfully and made a hit, while the press loaded its columns with credit for the stage machinists, who have been walking about ever since covered with sweat and glory. And these are the men into whose hands the architect places without thought the making or marring of so important a feature. And you cannot altogether blame the carpenters. They simply know the past. And upon those lines, let them be ever so conventional, clumsy or obsolete, continue to construct the stages upon which only productions hampered and often ruined by old methods can be produced. They have no poetic ideas to elaborate, no nice sense of the fitness of things. What to them are the softened outlines, the little bits of atmosphere that help so much in the effort to imitate nature? No, put the blame where it primarily belongs, upon the architect. The very character of his profession demands education, demands that he be broad, and eager to grasp any means or method to keep his work from being a laggard in the pageant of civilization. He, then, it is that should first seek some artist of repute, and say to him: "I want to build a stage as well as an audience room. I want to know what your experience has shown to be faulty and unnecessary. I want to know what to avoid doing as much as that which is essential. I want nothing on that stage that will in any way prohibit the successful achievement of a perfect rendering of any of nature's moods."

And if, as the result of my words tonight, there may in the future come to the public *one* theater built upon such lines, I shall feel that I have not wasted an evening, either for you or myself. For then, and then only, will the stage have the opportunity of offering to men of ability a perfect field in which to work out ideal settings for pure plays, untrammelled by the mistake mediocrity, or hampered by the methods of a by-gone day.

Gentlemen, I thank you for your attention.

Ecole des Beaux Arts.

AN interesting account of the great French school of architecture, the École des Beaux Arts, its recent student exhibits, the way in which students are admitted, the American representation among the aspirants, etc., is sent by Louis H. Gibson, of Indianapolis, as follows:

It is safe to say there are five hundred architectural students in Paris. About three hundred of them are in the École des Beaux Arts. A few days ago I saw two hundred aspirants for admission to that school assembled in one of the courts, awaiting their names to be called to pass into rooms to prepare drawings which were to serve as a part of their entrance examination. From this two hundred about one hundred will be selected to continue in the examinations of general mathematics, drawing, modeling, history, etc., and from this number thirty will be, eventually, selected as members of the school. Of the two hundred mentioned, thirteen were Americans. Twelve of them passed the examination in architectural drawing and design. It remains to be seen how many will pass the other test examinations; but, judging from their creditable efforts thus far, the outlook is flattering.

This school is unquestionably the best equipped and best managed architectural school in the world. Richard M. Hunt, of New York, is one of the oldest American architects it has produced. H. H. Richardson was also a student of this school. Likewise Mr. L. H. Sullivan, of Chicago, not to name other well-known American architects.

To give an idea of the volume of work turned out under the patronage of the school, I mention several exhibitions of drawings that I have seen within the last six weeks that were recent products and exclusively the work of the students. The first exhibition was by students of both classes. The second or senior class problem was for a country house. The first or junior class problem was a design for the interior of a private billiard room. For the former there were over a hundred sets of drawings exhibited, and for the latter a somewhat smaller number.

The second exhibit, which occurred last week, was made by the second class students alone. It comprised a hundred drawings. The problem was a baptismal font and accessories for a chapel attached to a cathedral. It was a distinctively decorative problem and called for high grade water-color work. It is only necessary to say of this display that the spirit of boldness in the conception and brilliancy of rendering in the drawings could be begotten of nothing outside of personal adaptation, long experience and the ancient artistic heritage attached to the curriculum of this great school. This week there is an exhibition of drawings for a conservatory of music, a casino, and a boat house. For the former there are more than a hundred sets, for the casino about sixty, and about the same number for the boat house. During the latter part of this week there will be an exhibition of drawings for the "American Prize." In addition to the above I may state there has just closed an exhibition of the drawings of the aspirants for admission to the school. This will give an idea of what is being done. I may state while there have been an unusual number within the last week, large exhibitions are of frequent occurrence.

While it is an easy matter to represent by figures the amount of work produced it is not so easy to represent its quality. I may say this: The average age of those entering the school is about twenty, and that for the most part the aspirants have been preparing for a period of from four to five years with a view to be qualified for admission. The men in the first or youngest class frequently stay four or five years and those in the second class remain until they receive their diploma, or having reached the age of thirty leave under the rules of the school which debars them from continuing longer. During all these years they are under the best possible instruction. Certainly no such work can be seen elsewhere in the world. The rendering of drawings surpasses anything with which an American architect unacquainted with the work of this school is familiar. All are rendered in color and by men for the most part who have studied drawing and coloring all their lives.

The Americans who come here are quite well equipped. Frequently they are college graduates of an artistic turn of mind, men who have spent two or more years subsequent to their college work in the Institute of Technology, Columbia College School of Mines, or other similar institutions. In other instances they are the product of the best American offices, capable and serious-minded men who come for the advantage of the schooling.

Of the Americans who were recently examined the largest number were from Massachusetts, three were from New York, one from Philadelphia, one from St. Paul, and the remainder from other eastern states. Some come for special study and do not formally enter the school, but who are nevertheless in one of the ateliers of the school or ateliers preparatory to it. There are, however, objectionable features connected with school atelier work that those who have only one or two years to spend abroad would do well to consider, such as putting down paper, inking-in plans, mounting drawings, running outside errands, etc., all of which the new men, or "*Nouveau*," as they are termed, are expected to do much of their time in first year. This, taken in connection with other indignities to which new men have to submit to from the older students, makes the one or two year terms not so profitable as they might otherwise be; though in a five or six years' course such a training is not considered objectionable, as the *Nouveau* gains a certain amount of experience from working on the drawings of the older men, seeing the why and the wherefore of the results, and thus laying the foundation for future progress in the school. But where this work is the sum and substance of a year's training to an American who must return home at the end of the term, it is not satisfactory. The proposition has been made in times past by the new men to hire a substitute to do the work that is expected of them; but the older students of the ateliers will not submit to having it done by others than the *Nouveau*, as it would be changing their proper relations to their seniors. They have said: "This *Nouveau* work is the custom of the school. It has been handed down with other chattels to the present time and must be sustained. We have done *Nouveau* work and so must you," and so the barbarous custom continues.

There is an outside atelier, that of M. Duray, which is largely patronized by Americans. In it a janitor is employed and a proper and satisfactory condition of things exists.

As a matter of interest to all draftsmen in America, if not their principals, I give a synopsis herewith of the programme given by the School of Fine Arts at the last examination of which I made mention in the early part of this letter. It may not be known to all alike that all work of this school must be designed in the classic styles, either in their original forms or according to the interpretation of the Italian

and French renaissance; hence a knowledge of the orders and their application to general design is highly important to one who desires to enter this school.

PROGRAMME.

A PORTIQUE MUSÉE IN A PARK.

It is supposed that a rich amateur who possesses antique statues desires to erect a suitable edifice to display his precious objects of art.

The edifice is to be placed on a rise of ground, partially surrounded by trees, and to be so arranged as to form one of the principal points of view from the chateau. The structure shall have a sub-basement, grottoes, staircases and landings leading to the building above.

It is to be composed of exedros connected by a portico for promenade. In each of the exedros will be found a statue and seats for repose and conversation.

The largest dimension of the portico shall not exceed 20 meters.

A plan, section, elevation and detail of the capital of the order adopted are required.

In a future letter letter I shall give more fully the general requirements for the aspirants to this school, and I hope drawings of the solutions of some of the problems.

Paris, March 6, 1891. Louis H. Gibson.

The Sculptured Stones of Scotland.

THE fifth ordinary meeting for the session of the Dundee Institute of Architecture, Science and Art was held, April 9, in the upper hall of the Young Men's Christian Association. Mr. Alexander Hutcheson, architect, read a paper on "The Sculptured Stones of Scotland," Mr. Charles Ower presided, and there was a large attendance. Among those present were ex-Lord Provost Hunter, ex-Provost Brownlee, ex-Bailie Ogilvie, Mr. G. A. Harris, Mr. Alexander Maxwell, F.S.A., Mr. J. B. Charles, Mr. Leslie Ower, Mr. W. Mackison, Mr. J. J. Henderson and others.

Mr. Hutcheson, who was received with applause, dealt first with cup-marked stones. These, he said, although not belonging to the class of monuments distinctively known as "The Sculptured Stones of Scotland," were yet sculptured stones, and were, in fact, the oldest sculptures in this country, or perhaps in any other. The cups were described as little pits or hollows sunk in the surfaces of undressed boulders and slabs of stone, or on rocks. The cups varied in size from half an inch up to six or seven inches wide, and in depth from just as much as would hold the point of the finger to two or three inches. Occasionally the cups were surrounded by one or more rings arranged concentrically and sunk in the stone. Sometimes a channel or gutter extended from the central cup, cut through and across the inclosing rings, and at times similar channels connected single cups or groups of cups together. The markings were thus of the simplest kind. No marks which could be construed into an inscription had ever been found in the cup-marked stones, the probability therefore being that the race or races who carved the cup marks possessed no written alphabet or language. Stones or rocks inscribed in this manner were found all over Great Britain, and in many continental countries, particularly in the north of Europe and in Asia. The sculptured stones of Scotland, on the other hand, had no analogue in any other country; their art was distinctively Scottish. They were only found in Scotland, and with one or two exceptions, were in the earliest examples confined to the northern district of Scotland, comprehending the area lying to the north of the Forth.

The stones might be divided into three classes. The first class comprehended those stones which bore incised symbols; the second class showed the symbols combined with the figures of men and animals sculptured in relief, and along with them now appeared the figure of the cross. The third class bore sculptures in relief, but no symbols. From a list drawn up by Mr. Romilly Allen, it appeared that upward of three hundred and eighty examples of the sculptured stones have been recorded, of which one hundred and four were of the first or oldest class. Mr. Hutcheson exhibited a table showing the distribution of the stones, from which it appeared that Forfarshire was by far the richest county in point of possession, having no less than seventy-five examples, Perthshire coming next with fifty-three. The symbols consist of certain conventional types of semi-geometrical figures, known as the "crescent," "spectacle" or "double disc," "mirror and comb," and certain animal figures, as the elephant, serpent, etc. The range of the symbols was not wide, and they were of frequent repetition, the poverty of the decoration contrasting strongly with the rich variety of the ornamentation of the subsequent divisions — a poverty which, however, in great measure disappeared when the sculpturings proper to the second great division of the stones made their appearance. It was then seen that the symbols which accompanied the sculptures in relief, although having nothing in their outlines to suggest a difference, were now filled in with elaborate fret and interlaced work.

The figures in relief consisted of men and animals, combined with the Christian symbol of the cross, which was invariably of the Celtic type, known by recesses at the intersection of the arms, and distinguished by being usually filled in within its outlines by that ingenious interlaced work known as Celtic, with which the Iona crosses had made them familiar. In this class was seen to be a tendency to arrange the subjects in panels. That was first manifested in groups of figures rising one above the other; then these were inclosed in borders; and latterly the whole surface of the stone, including even the shaft and arms of the cross, was found to be divided into panels. The men represented occasionally had animals' heads, and were often engaged in combat with each other or with animals. The animals were mostly of nondescript type highly conventionalized, Jonah's whale being always represented with legs and paws and ears like a hare. In the third or latest division of the stones the early symbols had entirely disappeared. The cross, instead of being sculptured in relief on the front of a stone which in its outline bore no resemblance to a cross, now appeared as a cross pure and simple with projecting arms. To this class belonged the Iona crosses and nearly all the ancient sculptured monuments to be found on the west coast of Scotland and in the southern counties.

The art of the sculptured stones as it appeared in metals was referred to, and, in particular, the celebrated Hunterston brooch — considered by competent judges to be the finest specimen of ancient art ever found in Scotland — was described, and it was mentioned that within the last month this beautiful example of native art had been acquired by the Society of Antiquaries of Scotland.

The light cast on the age of the sculptured stones by the Celtic and Scoto-Irish manuscripts of the gospels, with their inimitable interlaced illuminations, was commented on, from which and from other considerations it appeared that the Scottish sculptured stones were to be attributed to the period ranging from the sixth or seventh to the twelfth century. The scanty examples of inscriptions exhibited by the early sculptured stones were noticed and described. The earliest of these — the Oghams — consisted of a stem line and cross digits, and was peculiar to the Celtic area, only about a dozen of examples being known in Scotland. The key to these, found in the Book of Ballymote, was exhibited and explained. The fragmentary inscription at St. Vigeans was the only one in the mainland of Scotland which was expressed in an alphabet bearing a resemblance to the Celtic writing in the ancient Scottish manuscripts. That inscription had been the subject of very varied interpretation, many readings of it having been put forth by skilled authorities without any definite conclusion having been as yet reached. It appeared to contain the names of two or three persons, but their connection with each other or with the stones was not clear. There seemed good reason, however, to conclude that the names were Celtic.

The art of the stones was christian, and was evinced by the presence of the cross; and the figures of men and animals, although sometimes incongruous and apparently out of harmony with present religious ideas, might not have really been so to those who carved them. The Bestiaries of the Middle Ages showed that a *Divine Bestiaries* system of religious teaching, based on the nature and attributes, real or supposed, of certain animals, prevailed in the Church in early times; and the probability was that the art of the Scottish stones had preserved to us the visible forms of this spiritualized natural history teaching as it prevailed among the Celtic population of Scotland a thousand years ago.

Mr. Hutcheson concluded as follows: "In Dundee we now possess in our museum a representation of the sculptured art of Greece and Rome of which any community might well be proud — a collection of examples invaluable to the student, and likely to be of inestimable service in fostering a high standard of public taste. In my opinion that standard will be defective which does not combine with it the first element of national life, a patriotic reverence for and a knowledge of what is best in the national history. For defect in this the study of classic models can never compensate. These may inform the judgment and purify the taste in matters of art, but they cannot enlist the affections as that art must do which appeals to the heart by association of birth and race; and in Dundee, which lies so near to the very centre of the district of the sculptured stones, we ought to have a corner of our museum devoted to a collection of casts of these national sculptures, so that students may examine them with ease and derive benefit from the study of a style of art which belongs to the most interesting period of our natural history — namely, that period when she awoke from the darkness of paganism to receive the light of the christian dispensation. Such a collection of casts, if made tolerably complete by the best examples, would prove that Dundee was not only progressive but patriotic, and would set an example to others which in time might result in a restoration of that national school of art which these sculptures conclusively show once existed in Scotland." (Applause.)

Mr. W. Mackison, ex-Bailie Ogilvie, and Mr. William Briggs offered a few remarks on the lecture, after which, on the motion of the chairman, a hearty vote of thanks was passed to Mr. Hutcheson for his admirable lecture.

Obituary.

AT a meeting of the architects of Omaha, Nebraska, held in the rooms of the Builders & Traders Exchange of that city, the following resolutions of condolence on the death of architect Herbert Reynolds Best were adopted.

Whereas, Herbert Reynolds Best has been cut down in the noonday of his life, and in the midst of his work:

Resolved, That we, his brother architects of this city, hereby express our profound regrets that the profession has lost in him a talented and rising architect, one thoroughly devoted to his art, and a man of marked ability, strict integrity and high culture;

Resolved, That we offer to his family our heartfelt condolence, and to his partners our most sincere sympathy in the irreparable loss they have sustained;

Resolved, further, That a copy of these resolutions be forwarded the family of the deceased and to his late partners and also that these resolutions be published in The Inland Architect, the *American Architect*, the Omaha and Boston daily papers.

After the above resolutions were adopted Messrs. Smith, Fisher, Lawrie and Hawkins spoke feelingly of the character and ability of Mr. Best, pointing out the examples and thoughts found in the works of the late architect. Isaac E. Burdick acted as secretary, Harry Lawrie, chairman.

Mr. Best was born in England in 1862, and practiced his profession there after completing a course in the Royal Academy and subsequent employment in the office of Edward Burgess. He came to this country six years ago, and forming a partnership with C. Howard Walker, of Boston, under the style of Walker & Best, the firm name has become known in connection with much good work both in the East and at Omaha, where Mr. Best had a branch office at the time of his death.

Cincinnati Architectural Club.

THE Cincinnati Architectural Club held its third annual meeting May 8. The reports of the president, Mr. Zettel and Mr. Davis, the secretary for the past year, showed the club to be in a flourishing condition and constantly growing in membership, and the club to be one of the foremost sketch clubs in the country, which is not only due to the work of these officers but to the untiring efforts of the executive committee.

After the reading of annual reports and the transaction of other business, the following officers were elected for the ensuing year:

President, G. W. E. Field; vice-president, L. G. Dittoe; secretary, M, Heister; treasurer, A. Stedman. These officers and J. Zettel compose the executive committee.

After the election of officers the meeting adjourned, and upon the invitation of the executive committee the members sat down to a dinner given at a neighboring caterer's where the rooms were decorated to suit the occasion. The menu was excellent and enjoyed, the courses being interspersed by toasts that were sometimes witty, sometimes full of reminiscence, and some full of prophesy for the success of the club. The members retired well pleased with the success that has crowned three years of enterprising effort and unremitting labor.

The club competitions for the coming year are as follows:

June 12, 1891.— Interior sketch, including mantel, clock, table and seat.

July 24, 1891.— Sheet of local colonial work.

September 4, 1891.— Sketch from nature.

October 16, 1891.— Litch gate.

December 4, 1891.— Modeling in clay, subject, an ornamental corbel.

January 15, 1892.— Rendering from description.

February 26, 1892.— Wrought-iron hinge.

April 16, 1892.— Carved stone capital. Italian renaissance.

Notes from our French Exchanges.*

IN connection with some notes recently published relative to admission of pupils at the Ecole des Beaux Arts, the following card from one of the professors published in *L'Architecture* is of interest:

Pupils desiring to present themselves at the examination of the Ecole des Beaux Arts for the section of architecture have found means sadly lacking to prepare themselves for the drawing and modeling so important in their artistic instruction and necessary for their entrance examination.

While instruction was easily obtained in mathematics, descriptive geometry and history, and the elements of architecture could be learned in the various ateliers, up to the present no instruction was easily obtainable for the preliminary studies of drawing and modeling.

The school could, of course, only give instruction to pupils who had been admitted, and preparatory pupils were obliged to learn these branches wherever they could pick them up, in the city schools, or other classes not especially for them, whose aim was different from that of architectural study.

The professors have often regretted this lack of instruction and are pleased to announce that this exists no longer, since the well-known sculptor, M. Raymond Barthelemy, a "grand prix de Rome," who also practises decorative sculpture with equal success as the human figure, has just opened a studio for these preparatory students. All the profession have strongly encouraged this undertaking and, by a fortunate chance, rooms at the very door of the school (No. 16 Rue Bonaparte) have been obtained.

(Signed), J. GUADET.

CEMENTS MADE FROM METALLIC SLAG.

The industry of manufacturing cement from slag, the use of which is becoming more and more general, was started from the desirability of utilizing the great quantity of residuary products that result from the refining of crude ore. As is well known, the metals in general, such as iron, for example, exist in the ore in more or less simple combinations (oxides, carbonates, etc.), but also mixed in variable proportions with earth or stone, which constitutes what is technically known as gangue. By itself this is infusable at the temperature reached in the treatment of the ore; but in order to get rid of it, it is mixed with certain calcareous substances, when it easily fuses, and this result is the slag.

It is evident that all slags have not the same composition, since the stone and the minerals added to it are not always the same. They may be divided, in fact, into three groups, according to their composition, but in a general way, the only one that can be successfully employed in the making of cement are the double silicates of lime and aluminum. In a recent paper read before the Society of Architects of Berlin, some details of the manufacture and employment of the cements were given by Dr. Pinkinburg.

It appears that Germany possesses a dozen factories where these cements are made, and that they produce about 600,000 barrels per annum: these barrels, weighing about three hundred and twenty pounds, are sold at $1.25 at Berlin.

The two characteristic properties of the slag cements are: first, its slowness of setting: second, its small specific gravity.

The time required for setting is about fifteen hours, but this slowness has the advantage of allowing the use of slag cement without all the precautions necessary with cement that sets very rapidly. It has, however, one drawback to its employment in countries where the winters are very cold; namely, it must not be frozen before it has set. Experiments made at the government laboratories at Berlin gave unfavorable results in this respect. The samples exposed to a very low temperature during the setting showed (twenty-eight days after) a very inferior strength to those that had set where the temperature was normal.

The small specific gravity is an objection in case where the cement is to be run in a liquid or semi-liquid state into molds, since, being lighter than sand, the various compounds of the cement separate, more or less, according to their density, and the mass is no longer homogeneous when the setting takes place. Experiments at several pieces of work at Berlin, leave no doubt in this respect.

Beyond the cases mentioned, the slag cement has been extremely satisfactory in all cases where it has been properly used. In fineness of grain, strength, etc., these cements fulfill all the requirements demanded by the government of Portland cement employed on the government work, and they possess the excellent quality of never shrinking in volume. This slag cement has been successfully used in the construction of a sandstone bridge at Berlin; in this case the mortar was composed of fine sand and cement in equal parts.

The chemical reaction which takes place during the hardening is not the same in slag cement as in Portland cement. According to M. Tetmajer, the slag cement requires, more than almost any other cement, the presence of water during the first period of its hardening (hardening not to be confounded with setting). Its hardening differs from that of the cements in which lime and the other constituents are chemically combined during their burning; in this case the action of the lime upon the silicate is effected by the intermediary of water. If, the cement having set, a quantity of water is not furnished sufficient to disolve the lime, and form hydrosilicate of lime, or if the excess of water in the mortar has been absorbed, the process of hardening is stopped, and the maximum strength of the mortar is that which it acquired in a relatively short time. This is what happens when the mortar is allowed to dry without continuing to wet it down from time to time.

This explanation by the learned professor of Zurich shows the method that should be used in the employment of slag cement. The stone should be wet until saturated, so that the water required for the setting of the mortar will not be absorbed by them. During the setting the wall should be left alone, but as soon as this process has taken place, the work should be regularly and abundantly wet down, so that the ulterior hardening is not stopped.—*La Semaine des Constructeurs.*

Expeditions seem now to be the order of the day most everywhere. We have had occasion already to speak of the exposition at Chicago, which will—at least in the opinion of the Americans—eclipse that of '89 at Paris.

Jealous at seeing the French Americanize themselves to the point of building an iron asparagras 300 meters high, our friends in the United States have decided to do better or at least to do something larger, which is a very natural and legitimate sentiment. Since the Yankees believed themselves up to the present the only ones to measure beauty and grandeur by the yard, they have decided to crush us, morally and in an entirely peaceful struggle, be it understood. They are to construct a terrestrial globe whose diameter shall be the height of our Eiffel tower, advancing thus from plane to solid geometry. This is indeed real progress and a step in advance!! —*La Semaine des Constructeurs.*

Workmen digging a ditch in the suburbs of Aubagne, not far from Marseilles, recently discovered a curious Roman temple, which graceful little edifice was soon completely uncovered from the earth that had concealed it for centuries. The temple is quite well preserved, and measures nearly 19 feet high and 22 feet long. It resembles in a most striking manner the "Maison-Carrée," at Nimes, that jewel of Roman art for which Alberoni demanded a cup of gold, and which Colbert wished to transport to Paris and there build again, stone by stone.

A beautiful statue of Diana, found in the interior of this temple, leads to the belief that it was dedicated to this goddess. Several fragments of sculpture were found which have been carefully preserved in an adjoining house, awaiting transportation to the museum of Marseilles. One of these fragments bears the following inscription, which seems to have baffled those who have attempted to decipher it:

TRI . . . . . AE . . . SYLV . . . . ERE.

This is the most important archæological discovery in France since the excavation of the Gallo-Roman city of Sanxay, near Poictiers. The Académie des Inscriptions will send a deputation to examine the new monument.—*La Semaine des Constructeurs.*

RUSSIAN ARCHITECTURAL ART.

Mr. Soultanoff, architect and engineer of St. Petersburg, recently delivered before the National Society of French architects a lecture upon the development of architecture in Russia, to which *La Semaine des Constructeurs* devoted considerable space, considering it a subject of which too little is known by the profession.

It is especially, says Mr. Soultanoff at the beginning of his talk, in the religious monuments that one can follow the development of architecture in Russia, and, moreover, the Muscovite art has always been essentially a religious art. Here are distinctly visible three grand periods: in the first, foreign influences, Roman and Byzantine, are evident; to the second belongs Russian art proper; and lastly, in the third is what may be called the modern period.

From the fourth century the Byzantine style was employed along all the shore of the Black Sea, and then gradually penetrated into the Balkans peninsula, and from there into Sclav Russia, where it was maintained in its original form and purity as long as in any other country. At this point the lecturer, interpreting in a novel and ingenious fashion a passage from Vitruvius relative to the construction of dining halls, finds a remarkable analogy between the dispositions there indicated and the constructive methods adopted for the Greek churches. The four Roman columns, forming a square, are the same in the Byzantine plan; the superstructure which surmounts them is replaced by a dome, while the ceilings which cover the surrounding galleries are changed to cylindrical vaults. Leaving to Mr. Soultanoff the responsibility of these deductions, the attention is brought to the church of Saint Sophia (divine wisdom) at Kief as being one of the most characteristic specimens of Byzantine art in

*Translated and arranged by W. A. Otis for THE INLAND ARCHITECT.

Russia. This monument, which dates from the eleventh century, had its façade modified in the thirteenth century, but the remainder was unchanged, showing the interior, with its decoration of enameled mosaics upon a background of gold, as purely Byzantine.

To the Greek influence was later added that of the Romanesque, from the West, as shown in the remarkable edifice of the Church of the Transfiguration constructed in the fourteenth century at Novgorod in Finland. The plan is Byzantine, while the upper portions, or at at least the roofing, are in the true Russian forms, and the ornamentation is Romanesque. Mr. Soultanoff attributes this latter fact to the commercial intercourse between Finland and the Hanseatic cities, owing to which German workmen came to Novgorod to practise their trades.

It was, however, in the twelfth century that the personality of Russian art began to assert itself, and the characteristics of the new style are manifested in the cathedral of Saint Demetrius at Vladimir, in the government of Vladimir. The plan of the building is still Byzantine, but that which is distinctively Russian is the great height which is given to the bays of the façade relative to their width, also the more slender proportions of the dome, and the narrow windows, this last condition probably necessitated by the climate. As a result of the changes, there is an appearance of delicacy which contrasts strongly with the heavier proportions of the Byzantine architecture. It is the predominance of the vertical element over the horizontal. In this same building the sculptured decorations are Lombard and Romanesque, which is accounted for by the presence of western workmen, Italians and others, who assisted at the finishing of the work, as is proven by the Russian records, attesting to the presence of the artificers.

In the fourteenth century a veil of mourning was thrown over Russia: the Tartar invasion covered the land with ruin, and was only stopped in the vicinity of Novgorod by the dense marshy forests which surrounded that city. The next century, however, saw burst forth what might be called a period of renaissance for monumental construction, and it is this period which constitutes in Russia the real national art. The development of this art is manifested, especially at the end of the fifteenth century, by the building, under the direction of the Italian architect Fioraventi, of the Cathedral of the Assumption, upon a model both Byzantine and Russian, and furnished by the buildings of Vladimir. Finally, during the sixteenth and seventeenth centuries, the original Muscovite architecture reached its highest point. In the monuments of this epoch are to be met elements from the Byzantine and the Mohammedan, and especially forms drawn from Sclav wooden constructions; among others may be noticed the church of the village of Medwio-Kovo, in the suburb of Moscow, which is of the sixteenth century, as also the cathedral of Holy Basil, at Moscow itself. The predominating form is the pyramid, surmounted and accompanied by bulbous domes.

In the second half of the seventeenth century, the patriarchs, desirous of returning to all purely Byzantine traditions, interdicted the pyramidal form, particularly for the body of the church, so that the plan was generally a square, covered by a ribbed vault or a dome surmounted by five bulbous cupolas, that in the center symbolizing Jesus Christ, and the other smaller ones, the four evangelists. Two chapels opened into this square place, one from the south and one from the north, each crowned with a separate cupola, while three apsides and a circumscribing gallery completed the plan, except that at the front, and absolutely distinct from the principal building was a bellfry surmounted by an octagonal pyramid and a bulbous cupola.

Decadence commenced with the end of the seventeenth century and the beginning of the eighteenth, the general forms reproducing in stone or brick those employed in wood, but the ornamentation followed somewhat the styles then prevalent in Poland and central Germany.

From the time of Peter the Great, it is the Western European art that predominates, and there is no more real Russian art. At present, however, there is a new revival of the old Muscovite architecture of the seventeenth century, and one of the principal causes for this renaissance being a law of Czar Nicolas compelling the use of this style for all church buildings. Among the modern buildings belonging to this style, may be mentioned the Historical Museum and the Polytechnic Museum at Moscow; the new City Hall, also at Moscow, but which is not yet entirely completed, is likewise in this style.

Mosaics.

Brouse & Martin, the architectural photographers, of Chicago, have removed to 103 Adams street, next to Kinsley's.

The Darwinian theory of the survival of the fittest does not always follow in fact, especially in regard to journals, as the following will attest:

The publishers of the *Architectural News* (of San Francisco) regret to announce that the publication of their journal has been indefinitely suspended, and respectfully request that notice to that effect be given through the columns of The Inland Architect.

The *Architectural News*, upon its appearance a few months ago, had a professional appearance and quality which is entirely lacking in some of the journals that have been placed in the hands (and very often in the waste baskets) of architects. It is sincerely hoped that capital and business ability may be added to the undoubted architectural and literary talent of its projectors, and architects and draftsmen may see it again with those charmingly executed drawings that made the former numbers attractive, enclosed in a dress of many advertising pages.

The Pioneer Fireproof Construction Company have recently applied fireproof material to a new use in the construction of the Virginia avenue viaduct in Indianapolis. This viaduct is three-quarters of a mile long, and the roadway is entirely of hollow tile construction. This company have recently introduced a very light and greatly improved form of floor arch construction, and within the past ninety days have been awarded contracts for the fireproofing of the Northern Hotel, Masonic building, Woman's Temple, Fair building, Chicago Cold Storage warehouse, the Peter Hand and Independent breweries, and the new Lexington Hotel, all in Chicago; the Equitable building, Atlanta; Pfister hotel, Milwaukee; Bell Telephone building, Toronto, and the Mather building, Cleveland.

Our Illustrations.

Transportation Building, World's Columbian Exposition, east and north elevations and plan of building and annex; Adler & Sullivan, architects, Chicago.

Machinery Hall, World's Columbian Exposition, perspective view of east façade and colonnade entrance to live stock department; Peabody & Stearns, architects, Boston, Massachusetts.

Fisheries Building, World's Columbian Exposition, main elevation, end elevation and plan; Henry Ives Cobb, architect, Chicago. The elevations and plan show the main building only. From this a a colonnade extends from either end, each terminating in a circular aquarium.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

First Presbyterian church, Lake View, Chicago; Burnham & Root, architects.

Block of four houses, with floor plan, for G. A. Springer, Chicago; Pond & Pond, architects.

Residence of Z. P. Brosseau, Chicago, with floor plan; Burling & Whitehouse, architects.

Residence of W. H. Van Tine, Cleveland, Ohio, with floor plan; Clarence O. Arey, architect.

Main entrance, Pacific Express Office Building, Omaha, Nebraska; Cleves Bros., architects.

Mantel and library, residence of A. W. Chamberlin, Denver, Colorado; Kidder & Humphreys, architects.

House, with floor plan, for A. E. W. Painter, Allegheny, Pennsylvania; Longfellow, Alden & Harlow, architects, Pittsburgh.

Legal Notes.

FORECLOSURE OF MECHANIC'S LIEN.

Under the mechanic's lien law of New York it is not necessary to prove full performance of the contract to enable a material-man to maintain an action to foreclose his lien. Hollister *vs.* Mott, Supreme Court of New York, 10 N. Y. Supp., 409.

PAYMENT UNDER BUILDING CONTRACT.

A contractor built a house under a contract, and brought suit for a balance claimed to be due him. The owner of the house testified that he had paid the amount due. The burden of proof is on the contractor to show that there was something owing him on the contract, failing which he cannot recover. Hall *vs.* Abells, Supreme Court of New York, 10 N. Y. Supp., 581.

ERECTION OF BUILDING — INTENDED BUSINESS.

Where the plans of a contemplated building have been submitted to and approved by the superintendent of buildings of a city, the possibility that the property may be used when the building is completed in a manner detrimental to the rights of an adjoining property owner, is no ground for granting an injunction to restrain its erection. Depierris *vs.* Mattern, Supreme Court of New York, 10 N. Y. Supp., 626.

RIGHT OF LABORERS UNDER MECHANIC'S LIEN.

A contractor was, by the terms of his contract, to receive only eighty per cent of the contract price until three months after the completion of the work. He abandoned the contract before its completion, having received the eighty per cent due him. An employé had no lien on the remaining twenty per cent, because no part of it ever became due to the contractor, though the work was completed by his sureties. Weisman *vs.* City of Buffalo, Supreme Court of New York, 10 N. Y. Supp., 569.

MECHANIC'S LIEN DOES NOT ATTACH TO SCHOOLHOUSE.

Mechanic's lien laws do not in the absence of express provisions apply to public buildings erected by states, counties and towns for public uses, and schoolhouses erected for the use of public schools come within the above exemption. Such buildings are exempt from attachment, and from sale upon execution, and for the same reason are exempt from liens which might result in an adverse sale. Hovey *vs.* Town of East Providence, Supreme Court of Rhode Island, 20 At. Rep., 205.

COURT HOUSE CONSTRUCTION IN INDIANA.

The statutes of Indiana vest in the county commissioners entire discretion as to the necessity which may arise for the construction of court houses and their decision that a new court house is necessary is not subject to revision or appeal, unless there is evidence of palpable fraud. The provision of the statute that commissioners shall not make any contract for the construction of any court house until plans and specifications have been adopted does not prevent the incorporation in the adopted specification of a provision that commissioners may alter the details of the work, with corresponding changes in the contract price. Mitchell *vs.* Board of Commissioners of the County of Union, Supreme Court of Indiana, 24 N. E. Rep., 366.

Association Notes.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting of the club, May 4, was well attended and gave a most enthusiastic reception to Mr. Ernest Albert, the scenic artist, who read a paper upon scenic art, treating from the scenic artist's standpoint, scenic effects and stage construction, where and how architects fail in stage construction, stage settings, tricks of the stage, etc., in a masterly manner. The paper was illustrated by models of stage settings made by the lecturer and others for celebrated plays, and added much to the lucid and practical descriptions. At the close of the lecture, Mr. Albert was treated to an ovation such has rarely been accorded a lecturer before the club. It was announced that the Art Institute required the rooms now occupied by the club, for class purposes, and that the lease could not be renewed, and new and commodious quarters had been secured in the Athenæum building, which adjoins the Art Institute building, where an entertainment by club members will be given May 18, open to members only. The report of the adjudicating committee upon the water-color from photograph competition, gave first place to "Van," Arthur Heun; second place to "Cousin Pons," F. L. Linden; third place to "Splash," O. G. Brown; and fourth place to "Sap Green," R. E. Schmidt. In this competition the drawing of Thomas Millay was received too late for adjudication, but might well have taken a high place, if not first, in the list of competitors. The report of the committee upon bridge and tollgate competition was postponed.

The subject for the next competition was announced. It will be a design to a given line and close June 1.

PHILADELPHIA T-SQUARE CLUB.

At the last meeting of the Philadelphia T-Square Club, held April 13, it was decided, in recognition of the valuable work that is being done in architectural education by the Department of Architecture of the University of Pennsylvania, to establish prize memberships in the T-Square Club for students of the school. These memberships are to be awarded to the students whose work in design shall be found best by the club's committee of judges. The work to be considered is that done by the students in their regular monthly problems in design.

Two of these prize memberships will be awarded each year, one in January and the other in June. They will admit the winner to the full privilege of an active membership, but will exempt him from all dues and expenses. He will retain the membership during the period of his studentship in the school of architecture. Much interest has been created among the students by this decision, and it is expected that the drawings submitted in competition for the first studentship, which will be awarded next June, will give evidence of the excellence of the work that is being done at the University.

At the meeting drawings submitted by members of the club for a bank institution in the classical style were exhibited and criticised, the first mention being given to Mr. John J. Bissenger.

Personal.

A COPARTNERSHIP has been formed by architects Alfred H. Thorp and Wilbur S. Knowles under that style, with offices in their new office building at 21 West Twenty-fourth street, New York city, and at Orange, New Jersey.

J. P. GRAHAM has been appointed assistant chief of construction of the World's Columbian Exposition. Mr. Graham is a young man of wide experience, energetic habits, and will give valuable assistance to the chief of that department of World's Fair work.

A COMBINATION of architectural and engineering talent that will have a marked effect, is announced between Henry Ives Cobb, architect, and William Sooy Smith, of Chicago. Both gentlemen have won reputations in their professions that are national. Each will act in a consulting capacity to the other.

WILLIAM COSPER & CO. have inaugurated an industry that has some new and valuable features in the line of typewriting, adding to the work of specification writing, that of manuscript writing, proof-reading and the writing of personal letter advertising circulars. The firm is located over the Remington office, 196 La Salle street, Chicago.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, Ill., May 15, 1891.

For six months or more, commercial and manufacturing enterprise has been held in check through the operation of causes that have not been clearly comprehended. How much longer these causes will continue to operate, it is difficult even now to say; they came unannounced and they may depart without demonstrative leave-taking. Those who pretend to speak for the business interests of the country are shouting, "have faith, large crops are in sight." Much is said as to the coming heavy export trade and of the revival in general demand which cannot be far off. It is not difficult to see that the restriction that has been forced upon the country, has, with all its disadvantages, been productive of some good results. An undue impetus has at times been imparted to business. Railroad building was for a time overdone. Speculation has frequently overreached itself. Manufacturers have at times overstocked the markets. Undue trade expansions have precipitated commercial crises. From some of these evils we are now comparatively free. Trade and manufacturing interests have been organized. The markets of the country are not being over-supplied. Thousands of business men are impatient of the restraint they are under because of the stringent monetary conditions. Withal a good and solid foundation is being laid for the future. Already there are faint glimmerings that the causes which produced the existing depression have almost exhausted themselves. The threatened labor upheaval of May 1, had its effect also. The legislation of the last congress was looked at suspiciously by many. After all, not one-half of the threatened evils have happened. The railroads are carrying more freight than last year. Engineers and architects do not talk as though they looked for much less business than last year. The industries are almost as active. More coal has been mined than for same time last year, by some millions of tons. Lumber interests count on a good year. Throughout the west a hopeful feeling exists, commercial failures are not above the average, new enterprises continue to multiply and there seems to be sufficient capital for all. Prices for material and commodities are low. Abundant opportunities seem to be opening up. The country is growing in wealth; of course the complaint is deep of the scarcity of money, and agitations have been started which will not be repressed until the question is pretty well understood. New faces and influences are entering the political field. The people are thinking for themselves. There are a few weak spots in business, but nothing to call for apprehension. The very difficulties encountered create greater capacity and help to dig out new channels. It is probable that the volume of business will increase from this out. The extraordinary productive capacity of the country will protect all interests against any serious or speculative advances.

Synopsis of Building News.

Buffalo, N. Y.—Architects M. E. Beebe & Son: For the Austin Estate, a two-story brick business block, all modern improvements; cost $60,000.

Chicago, Ill.—Architect Clinton J. Warren has just completed plans for the Unity building, to be erected on Dearborn street, near Randolph. It will be sixteen stories, covering a ground space 80 by 120 feet in size; and the height of the structure to top of cornice will be 210 feet; the front will be constructed of buff pressed brick, with terra cotta of the same color. The design shows a handsome and imposing building, with three bay windows extending up to the eleventh story, above this being a plain front. The interior will be elaborately finished in oak, marble wainscoting, mosaic floors, and have steam heat, electric light, seven elevators and the best of modern arrangements. It will contain 600 offices, besides the first and second floors, which will be divided off into large offices for banks. The main entrance leading to the elevators will be 16 feet wide and 24 feet high, with walls and ceilings in fine marble and mosaics. The cost will be $800,000. Architect Warren is also working on drawings for a fourteen-story hotel to be erected in this city. It is intended to make it the finest hotel in Chicago and will be fitted up regardless of expense. The cost will be considerably over a million dollars.

Architect Thomas Hawkes: For Dr. Price, on the northeast corner of Dearborn avenue and Division street, a ten-story apartment house, 120 by 131 feet in size; to cost $500,000. It will have two fronts of a very handsome design and a novel feature will be balconies running from bay to bay of each story, thus forming a fire escape, and on the corner will be a tower 162 feet high. It will contain apartments from three rooms to ten, all being lighted from the open air; there will also be a reading-room, ladies' parlors, smoking-room and ballroom. At the top of the house will be located the kitchen, from which can be supplied, by dumb waiters, choice viands to all the apartments. On the roof will be a garden with propagating house and pavilion. The finest kind of interior finish will be put in, marble wainscoting, mosaic floors, three elevators, electric light, etc.

Architect William Griesser is preparing plans for a brewery plant of a capacity of 100,000 barrels, to be erected at Pittsburgh, Pa. He is also making plans for a brewery for George Walther, to be erected at Appleton, Wisconsin.

Architects Jaffray & Ohrenstein have made plans for a five-story store and flat building, 175 feet front by 84 feet deep, to be erected on Cottage Grove avenue near Thirty-ninth street. The front will be of Indiana pressed brick and Connecticut brownstone, it will cost about $75,000.

Architect M. H. Church: For A. MacLachlan, at Oak Park, a two-story stone-front residence, to have hardwood finish, slate roof, furnace and all the improvements.

Architects Swen, Linderoth & Co.: For B. F. Cronkrite & Co., five two-story and basement residences of handsome design, to be of frame with stone basements, hardwood interior finish, electric light, gas and the best of sanitary improvements. They will cost $30,000. For John M. Carlson & Co, two frame residences, with stone basements, hardwood finish, furnaces, etc.; to cost $11,000; to be erected at Rogers Park. They have also sent out plans for a Swedish Baptist Church, to be built at Morris, Illinois. It will be of frame with stone-basement, have hardwood interior, stained glass windows, furnace, etc. They are also making plans for a Swedish Baptist Church to be erected at Muskegon, Michigan.

Architects Kley & Lang: For Charles F. Thomas, a four-story and basement flat building, 50 by 72 feet in size; to be erected at 374 and 376 Huron street. The first-story and basement will be of buff Bedford stone, and above of St. Louis pressed brick and stone, with galvanized iron bay windows; the cost will be $16,000. For M. Colm, on Calumet avenue at No. 3323, a three-story and basement residence, 21 by 72 feet in size; to cost $15,000. The front will be of Bedford stone, interior to be finished in hardwoods, have all the improvements, and hot-water heating. For Miss Lizzie Justi, on Leavitt street, near North avenue, a three-story and basement flat building, of the St. Louis pressed brick. For Albert Keefer, a three-story and basement flat building, 25 by 56 feet in size; to cost $6,200; on Sheffield avenue between Centre street and Garfield avenue. The front will be of Connecticut brownstone and St. Louis pressed brick. For Julius Wolf, on Larrabee street, near Clybourn avenue, a two-story and basement store and flat building, of St. Louis pressed brick and stone front, with galvanized iron bay windows.

Architect William Ohlhaber: For John Mullen, a three-story and basement store and flat building, 50 by 75 feet in size; to cost $12,000; to be built on Lake street and Ashland avenue. The front will be of St. Louis pressed brick and Bedford stone, with galvanized iron bay windows. For John Gleason, on Seymour street, near Division, a two-story and basement flat building, of St. Louis pressed brick and Bedford stone. For Fred Niles, at 305 Armitage road, a two-story store and flat building, of St. Louis pressed brick and Bedford stone front. For John Lemster, a three-story and basement flat building, on Lincoln street near Division street, of St. Louis pressed brick and Raindrop brownstone front. For the Furniture Specialty Company, on West Superior street, a two-story factory, 50 by 75 feet. For John C. Quelke, at 1097 Milwaukee avenue, a four-story and basement store and flat building, of St. Louis pressed brick and stone; to cost $12,000. For Otto Bausedow, on Humboldt boulevard, a two-story residence, of buff Bedford stone front, steam heat and all improvements. For John Schwerin, on Ashland avenue and Superior street, a two-story and basement residence, 32 by 48 feet in size; to cost $7,000. The front will be of blue Bedford stone, the interior finished in hardwood, and all the improvements and steam heat will be put in. For John Courtney, a handsome cottage, 21 by 56 feet and two-story barn, 30 by 50 feet; to be built on Robey street near Thomas, steam heat, St. Louis pressed brick and terra cotta; cost $5,000. For Conrad Dalbke, on Lincoln street near Thomas, a three-story and basement flat building; to cost $6,000 St. Louis pressed brick and Connecticut brownstone. For John Wagner, on Fullerton avenue, near Milwaukee avenue, a three-story and basement store and flat building, of St. Louis pressed brick and stone; to cost $5,000. For himself on North avenue and Wood street, a four-story and basement store and flat building, 80 by 80 feet; to cost $20,000; St. Louis pressed brick and Bedford stone front and all improvements.

Architect H. B. Wheelock: For Vickery Bros., at 1200 Wabash avenue, a six-story apartment house, 25 by 140 feet; to cost $45,000; pressed brick and stone front, hardwood finish, steam heat, passenger and freight elevators, electric light, etc. For Robert A. Gordon, on Forty-fifth street and Grand boulevard, a three-story and basement residence; to cost $15,000. Bedford stone front, hardwood finish, gravel roof, furnace and all improvements.

Architect A. Druiding: For Rev. Charles Hoogstedt, at Tomahawk, Wisconsin, a Catholic church, 50 by 100 feet in size, with tower 120 feet high, to be of

brick veneer, hardwood interior finish, slate roof, hot-water heating, etc.: cost $20,000. For Rev. Buchman, at Tonowanda, New York, a two-story residence to cost $7,500. Also just sent out plans to Burkhart, Monroe County, Ohio, for a Catholic church, 50 by 100 feet in size, with tower 125 feet high, to have hardwood finish, furnace, etc., and cost $21,000. For Rev. P. Augustine, at Moorhead, Minnesota, a Catholic church, to cost $12,000; also finished plans, for Bohemian church, to be erected near Douglas Park. It will be a two-story building to be used as a church and school rooms; to be of brick and stone with gravel roof, have hardwood finish, furnace, etc. Architect Druiding also prepared plans for a handsome Catholic church, to be erected at Oshkosh, Wisconsin, to be called St. Mary's. It will be in the Gothic style of architecture, with two towers 180 feet high, and cost $65,000.

Architects Bell & Swift will make plans for the Reformed Episcopal church to be erected at Englewood. It will be in the perpendicular Gothic, of stone front, with slate roof and handsome square tower, oak finish, pews to seat 450 persons, stained glass windows, furnace, etc., size 46 by 100 feet.

Architects J. M. Van Osdell & Co.: For Mrs. Bertha Marsh, on South Park avenue and Thirtieth street, a three-story and basement apartment building, to cost $30,000. It will have a Portage stone front, steam heat, and all improvements.

Architect J. E. O. Pridmore: For E. L. Gould, et al., a four-story store, office, hall and apartment building, 67 by 120 feet in size, to be erected corner of Forty-third street and Vincennes avenue. The front will be of Tiffany pressed brick and buff Bedford stone, with copper bay windows. The interior will be finished in hardwoods and have steam heat, elevators, electric light, marble and tile work, frescoing, and all the improvements. The cost will be $50,000.

Architects Jennie & Mundie: For L. Z. Leiter, preparing plans for new building, on Wabash avenue, across the alley from the present large building on State, Van Buren and Congress streets. It will be eventually a twelve-story building, 50 by 170 feet in size, of substantial fire-proof construction, and will contain stores and offices. These architects have moved from the Lakeside building into a very handsome suite of offices in the Home Insurance building.

Architect F. B. Abbott: For R. P. Probasco, a four-story apartment house, to cost $50,000, on the northwest corner of Stanton avenue and Oxford Court.

Architect H. D. Deam: For O. C. Wolcott, on Forty-fifth street and Lake avenue, a four-story flat building of buff Bedford stone front, hardwood interior, hot-water heating, etc.; to cost $13,000.

Architect H. M. Hansen: For F. D. Turner, on Wrightwood avenue and Clark street, a block of four-story stores and flats of 139 feet frontage; to cost $60,000; St. Louis pressed brick and Bayfield brown stone, steam heat, etc.

Architect E. H. Turnock prepared plans for a six-story apartment house, 100 by 130 feet in size, to be erected on Indiana avenue, near Twenty-eighth street, steam heat, elevators, etc.; cost $125,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

The welcome springtime has come and its warming sunshine is certainly affecting business in the shape of good contracts; reasonable amount of work, and in the completion of structures commenced last season, or rather towards the end. The tormenting weak-backed stovepipe has been removed, and the sound of cuss words is heard no longer in the land. I suppose, however, that furnace men will still continue to hunt for contracts just as though summer was not coming. At the present writing there are no indications of strikes.

Architect H. E. Siter reports: For the Chapel of the Nativity, Rev. A. B. Howard, rector, a church edifice; materials: stone, slate roof, hardwood, stained glass, gas, plumbing, church furniture, etc.; cost $12,000.

Architect G. W. Drach has prepared plans for a row of five houses, for Robert J. Morgan, Cincinnati; materials: stock brick, tin roof, mantels, pine finish, grates, gas, plumbing, furnaces, plate glass, etc.; cost $40,000. For Mrs. H. Dahm, two houses; one to be built of stone and plaster; the other of brick and plaster, and each to have slate roof, furnaces, stained glass, hardwood finish, gas, plumbing, mantels, grates, etc.; cost for both $20,000.

Architect L. F. Plympton has drawn plans for the Maysville Fair Company for a grand stand; cost $10,000.

Architects Crapsey & Brown have prepared plans for additions to the Waynesville, Ohio, schoolhouse; material: brick. slate roof, school furniture, furnaces, etc.; cost $10,000. For Mrs. E. M. Jordan, an office and store building, at Mount Sterling, Kentucky; materials: pressed brick, stone, tin roof, galvanized cornices, iron, etc.; cost $10,000.

Architects Aiken & Ketchum have prepared plans for a residence for Mr. E. B. Sargent, city; materials: frame, slate roof, blinds, mantels, grates, furnaces, stained glass, hardwood finish, laundry, etc.; cost $10,000.

Architect A. O. Elzner, city, has prepared the following plans: for the Winchester Opera House, Winchester, Kentucky; materials: pressed brick, asphalt roof, opera chairs, blinds, scenery, etc.; cost $30,000. Warehouse, for Mrs. L. B. Gibson, Mount Auburn, Cincinnati; materials: stone, iron, hydraulic elevators, asphalt roof, etc.; cost $20,000. For Mr. J. A. Gray, Covington, Kentucky, a store and flat building; materials: brick, stone, plate glass, furnace, mantles, grates, plumbing, gas, etc.; cost $7,000.

Architect Louis Piket has drawn plans for a house for John A. Ward, Madisonville, Ohio; materials: frame, slate roof, hardwood finish, plumbing, gas, blinds, etc.; cost $5,000.

Architects S. Hannaford & Sons have prepared plans for an addition to building for Russell, Morgan & Co., Cincinnati, size 60 by 150 feet, three-stories high; materials: brick, tin roof, steam elevator, plumbing, gas, machinery for printing, etc. For E. R. Stillwell, Dayton, Ohio, a residence; materials: pressed brick, stone, slate roof, hardwood finish, mantels, grates, plumbing, furnaces, etc. For F. H. Simpson, College Hill, Ohio, a residence; materials: frame, slate roof, furnace, gas, plumbing, fine finish, laundry fixtures, mantels, etc. For Allen Andrews, Hamilton, Ohio, a residence; materials: pressed brick, stone, slate roof, fine finish, mantels, grates, gas, plumbing, stained glass, etc.

Architect Geo. W. Rapp reports: for Mr. F. Eckstein, a store and flat building, eight stories high; materials: pressed brick, stone and terra cotta, hydraulic elevators, iron fronts, gas, plumbing; cost $90,000.

Architect Geo. W. Vogel reports: For Ripley, Ohio, an opera house; materials: brick, tin roof, steam heat, scenery, stained glass, blinds, etc.; $15,000. For Cincinnati Incline Plane Company, a power house; materials: frame, gas, plumbing, steam, electric power machinery; cost $18,000.

Architect Jas. W. McLaughlin reports: For Gen. A. F. Goshorn, Cincinnati, a residence; materials: stone, slate roof, hardwood finish, stained glass, mantels, furnaces, laundry fixtures, tiling, etc.; cost $30,000.

Architect S. S. Godley has the plans for a residence for Mrs. J. E. Rumbaugh, Asheville, North Carolina; materials: pressed brick, stone, slate roof, hardwood finish, mantels, plumbing, cement walks, etc.; cost $25,000.

Architectect John H. Boll has drawn plans for P. D. Cottle, for residence; materials: frame, slate roof, blinds, pine finish, mantels, plumbing, stained glass, etc.; cost $4,500. For Jacob Koummel, Esq., attorney at law, a house of similar construction, costing $4,000.

Architect M. Rumbaugh has prepared plans for an eight-story office building, for Mrs. Mary Perin; materials: pressed brick, tin roof, iron front, elevators, gratings, store fixtures, etc.; cost $10,000.

Detroit, Mich.—Architects Donaldson & Meier: For the St. Elizabeth Roman Catholic Church, a new church, to be situated on McDougall, near Willis avenue; pressed brick, trimmed with buff stone; cost $30,000.

Architects Gearing & Stratton: For F. E. & E. J. Smith, enlarging and remodeling four residences on Laurel street; cost $5,000.

Architect A. E. French: For S. W. Hood, two two-story residences on Alexandrine and Eighth streets; brick, with stone trimmings; cost $6,000.

Architect J. G. McLaren: For the Sandwich & Windsor Railway Company, of Windsor, Ontario, a two-story car barn; size 142 by 50 feet; brick, with galvanized corrugated iron; cost $8,000.

Architects A. C. Varney & Co.: For Eberts Bros., a two-story double residence on Rowena street, near Woodward avenue; brick, to cost $9,000. For Frank E. Robson, a two-story brick residence on Forest avenue, near Second street; cost $5,000. For R. W. Allen, additions and remodeling stores on Michigan avenue; pressed brick front and stone trimmings; cost $5,000. For John Grindley, a two-story brick residence on north side of Forest avenue and Third street; cost $5,500. For John Alley, a two-story brick residence; pressed brick, with stone trimmings, slate roof, on Alexandrine and Woodward avenues; cost $5,500. For Judge Philip T. Van Zile, a two-story brick residence on Forest avenue and Third street; cut-stone trimmings and slate roof, cost $5,000. For William A. Butler, a two-story residence on Forest near Third avenue; brick, with brownstone trimmings, slate roof; cost $6,500.

Architects Malcomson & Higginbotham: For the Disciples of Christ Church Society, a frame church building on Fourth and Plum streets; size 52 by 92 feet. For the Cass Avenue M. E. Church Society, a new stone church; size 68 by 100 feet; cost $25,000. For the First Congregational Society, Owosso, Michigan, a stone church, with slate roof, to cost $25,000. For William A. Pungs, a two-story residence on Ferry and Woodward avenues; stone, with slate roof; cost $12,000.

Architect John Schuman: For Anthony Kaiser, a two-story residence with barn on Fort street and Dearborn Road; pressed brick, stone trimmings and slate roof; cost $12,000.

Architect Henry Engelbert: For John Schmidt, a two-story store and flat building on Michigan and Humbolt avenues; pressed brick, to cost $12,000.

Architects Hess & Raseman: For Joseph Perrien, a three-story store and flat building, to cost $12,000.

Architect E. E. Meyers: For the Rev. D. M. Cooper, remodeling business building on Jefferson avenue, near Shelby street, at a cost of $7,000.

Architect Harry J. Rill: For Thomas Armstrong, a three-story double residence, to cost $11,000.

Architect George A. Depew: For William Gray, a two-story brick residence; stone trimmings, to cost $5,000.

Architect George W. Meyers: For Casper Schutte, a three-story brick residence; stone trimmings; on Macomb, near Hastings street, to cost $5,000.

Fort Worth, Texas.—Architects Sanguinet & Messer: For Mrs. E. A. Hendricks, a six-story office building, pressed brick and stone trimmings; to cost $150,000.

Harriman, Tenn.—Architect J. A. Thorne is preparing plans for the new Episcopal Church.

Kansas City, Mo.—Architect William Nier: For the First Presbyterian Church, at Moberly, Mo., a new brick church, size 66 by 70 feet; cost $20,000; also a two-story brick school house, size 62 by 57 feet; cost $10,000. For the Dewitt school board, a brick school house, size 49 by 52 feet; cost $7,000.

Architects Vrydagh & Shephard are preparing plans for a new brick theatre, to be situated on Walnut and Eighth street, size 100 by 120 feet; cost $100,000.

Architects James & James: For St. George's Parish, a chapel to the Cathedral, size 50 by 80 feet, brick and frame; cost $4,000.

Architect L. Kline will build a two-story brick residence, size 37 by 52 feet, on Eleventh street and Polk avenue; to cost $10,000.

Architect R. P. Simms: For Ernest Hoening, a two-story brick business block, size 20 by 45 feet; cost $3,000.

Little Rock, Ark.—Architects Rickon and Thompson: For the Deaf-mute Institute, additions to cost $10,000. For the City Electric Street Railway, a power house; to cost $35,000. For F. M. Fletcher, a residence, one and one-half stories, frame; to cost $3,000. For Geo. W. Martin, a two-story residence, frame; to cost $4,500.

Architect Thomas Harding has plans for Wolf Brothers, for three-story brick stores; to cost $13,000.

Louisville, Ky.—Architects Drach & Thomas: For Mr. John Doerhoefer, remodeling residence on Jefferson and Nineteenth streets; cost $4,000; to have slate roof. For A. H. Slaughter, residence; cost $11,400; location St. James Court; brick and stone trimmings, slate roof. For Ernest Morawek, residence; cost $6,500; location St. James Court; brick and stone trimmings, slate roof. For A. Keanshaar, frame residence, location Sixth and Hill streets; cost $3,500; shingle roof. For National Building and Loan Association, five buildings, location Second and St. Catherine streets; to cost $27,400; to be of brick and slate roofs.

Architects Clark & Loomis: For P. Galt Miller, college between Brook and Floyd streets, residence, to cost $6,600; to be of brick, stone and terra cotta, three-stories, metal roof, stone foundation, size 27 by 53 feet. Contractors Lortz & Frey. For J. H. Lindenberger, tenement house, second and Ormsby streets, two stories, brick and Rea stone trim, size 41 by 58 feet, metal roof, stone foundation. J. P. Savage & Bros. contractors. For S. S. Waters, a brick residence, with stone foundation, metal roof, two and-a-half stories, size 40 by 45 feet. Location Third, between B and Lee streets. J. P. Savage, contractor.

Architect W. Q. Wilson reports: Four-story iron front wholesale grocery house, for Mess. Onerbacku & Gilmore, 43 by 180 feet; cost $25,000. Country residence for Mrs. Steve Maxwell, frame cottage; $4,000. City residence, Frankfort, Kentucky, for Mr. Harry O. Donnell, $3,850 frame cottage. Block of five city residences, Louisville. Two-story and attic, six rooms, brick and stone trimmed. Lots 135 by 85 feet; cost $20,000. For Sam Weiss, alterations of store for dry goods, $7,000. For Brennan & Co., Southwestern Agricultural Works, three-story warehouse, size 102 by 32 feet; cost $6,000. Additions for the Northern Lake Ice Co., cold storage and ice plant, $85,000. For J. H. Rogers, Charlestown, West Virginia, a ten-roomed dwelling, brick and stone trimmed, slate roof; cost $10,500. For. C. C. Mengle, Jr., eight two-story brick houses of six rooms each. For Mrs. Geo. Long, alterations on small European hotel; cost $6,000.

Milwaukee, Wis.—Architects H. C. Koch & Co.: For the Hotel Pfister Company, a $360,000 hotel.

Architect W. A. Holbrook: For E. D. Holton, a two-story store building; to cost $25,000.

Minneapolis, Minn.—Architect Harry W. Jones: For Edmond Palmer, a four story flat building, size 100 by 140 feet, brownstone; cost $50,000. For C. H. House, a row of seven houses, brick, size 150 by 80 feet; cost $30,000. For W. S. Mills, a four-story flat building, size 50 by 100 feet; cost $25,000. For the Homeopathic Hospital Committee, a four-story brick hospital, size 60 by 40 feet; cost $7,000. For Northern Car Company, a brick factory, size 350 by 500 feet; cost $60,000. For the commissioners at Gaylord, Minnesota, a city hall, size 40 by 80 feet; cost $10,000. For the Bank of Litchfield, Minnesota, a 25 by 100 feet bank building; cost $6,000. For R. C. Haywood, a lake cottage, 75 by 100 feet; cost $5,000. For the Minnesota Land Company, five workingmen's houses at a cost of $6,000.

Architect A. L. Dorr: For J. H. James, a two-story brick flat building; cost $25,000.

Architects Orff Bros.: For Louis Moses, a two-story double brick dwelling, size 40 by 65 feet; cost $10,000.

Pittsburgh, Pa.—Architect F. C. Sauer: For John P. Schaffer, a two-story residence, brick, with all modern improvements; cost $6,000.

Richmond, Va.—The Building Committee of the Chamber of Commerce by resolution have appointed Captain M. J. Dimmock architect of the building, provided he will make certain alterations, etc., in his original plans which are thought desirable by the committee. The award was made some time since to Mr. Read and Messrs. Rogers and Higham provided they would modify and arrange the interior of one plan to the exterior of the other. These architects did not succeed in this undertaking, and it was then that the committee decided to call in an expert architect, Mr. McDonald, of Louisville, Kentucky, and submit to him without intimation of any previous award the five original plans and elevations. After spending about a week in the examination of these drawings, the expert reported that the plans and elevations submitted by "Utile Dulci" (Captain Dimmock) came nearest to the wants and requirements of a Chamber of Commerce building, and advised that the award be made to him. Captain Dimmock will go to work on his modified plans at once.

St. Louis, Mo.—Architect E. L. Janssen: For Mrs. Kraune, a two and one-half story residence, size 34 by 55 feet, brick, with stone trimmings; cost $20,000.

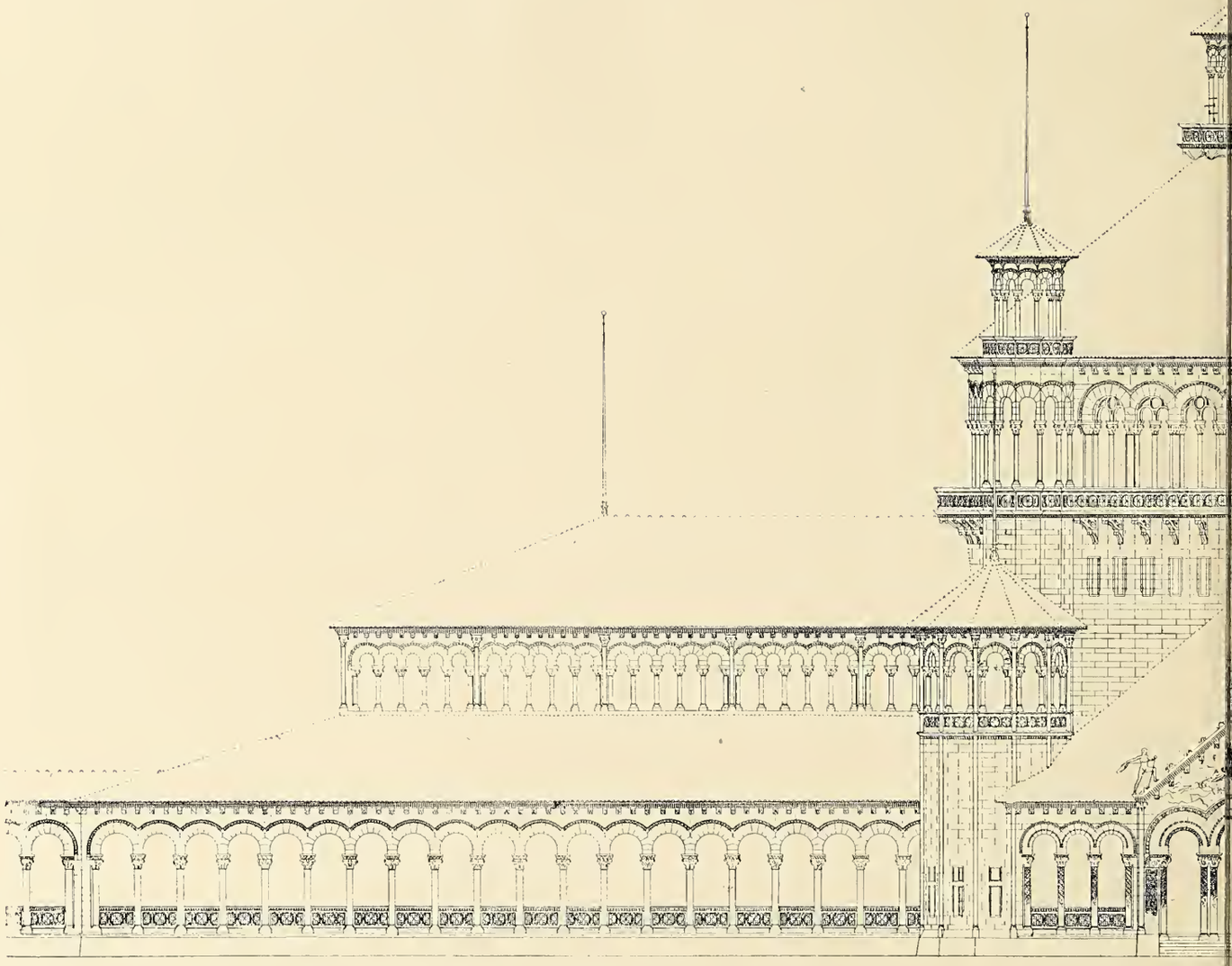
The J. B. Legg Architectural Company: For E. L. Beeding, a three-story residence, size 35 by 60 feet; cost $8,000. Architect A. M. Baker: For J. W. O. Connell, a two-story flat building, size 40 by 50 feet; cost $12,000.

Architects Beinke & Wees: For William Goldstein, a two-story brick residence, size 30 by 44 feet; cost $6,500. For George Sauerbrunn, a two-story flat building, brick and stone, size 37 to 65 feet, cost $7,000.

Messrs. H. Pauk & Sons will erect a four-story brick factory; cost $9,000.

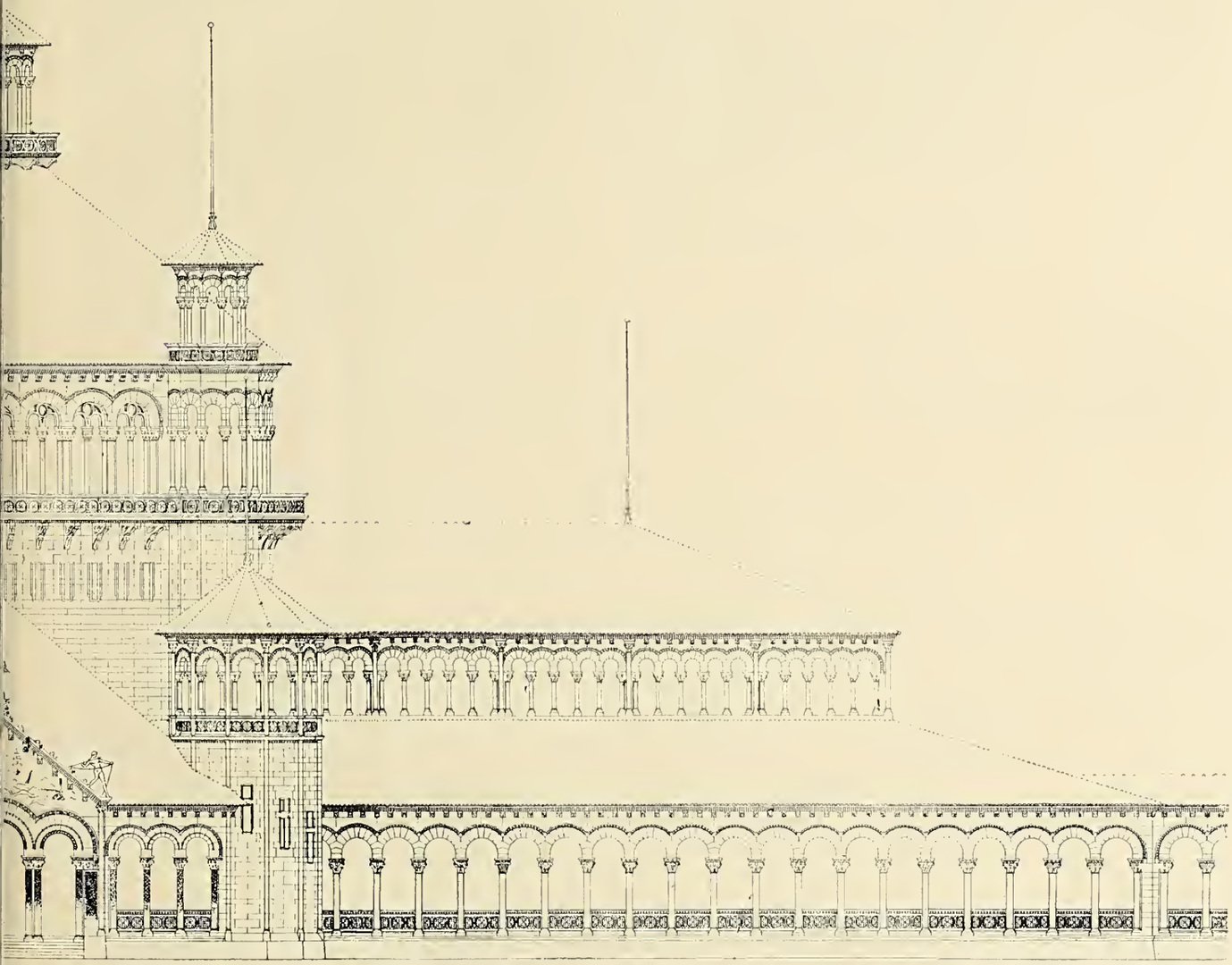
Toledo, Ohio.—Architects Tallis & Co.: For the Put-in Bay Hotel Company, a $150,000 hotel, size to be 600 by 300 feet.

Architects Bacon & Huber are preparing plans for an office building for the Toledo Bee Company.



FRONT ELEVATION OF MAIN SECTION OF FISHERIES BUILDING, WORLD'S CO

HENRY IVES COBB,

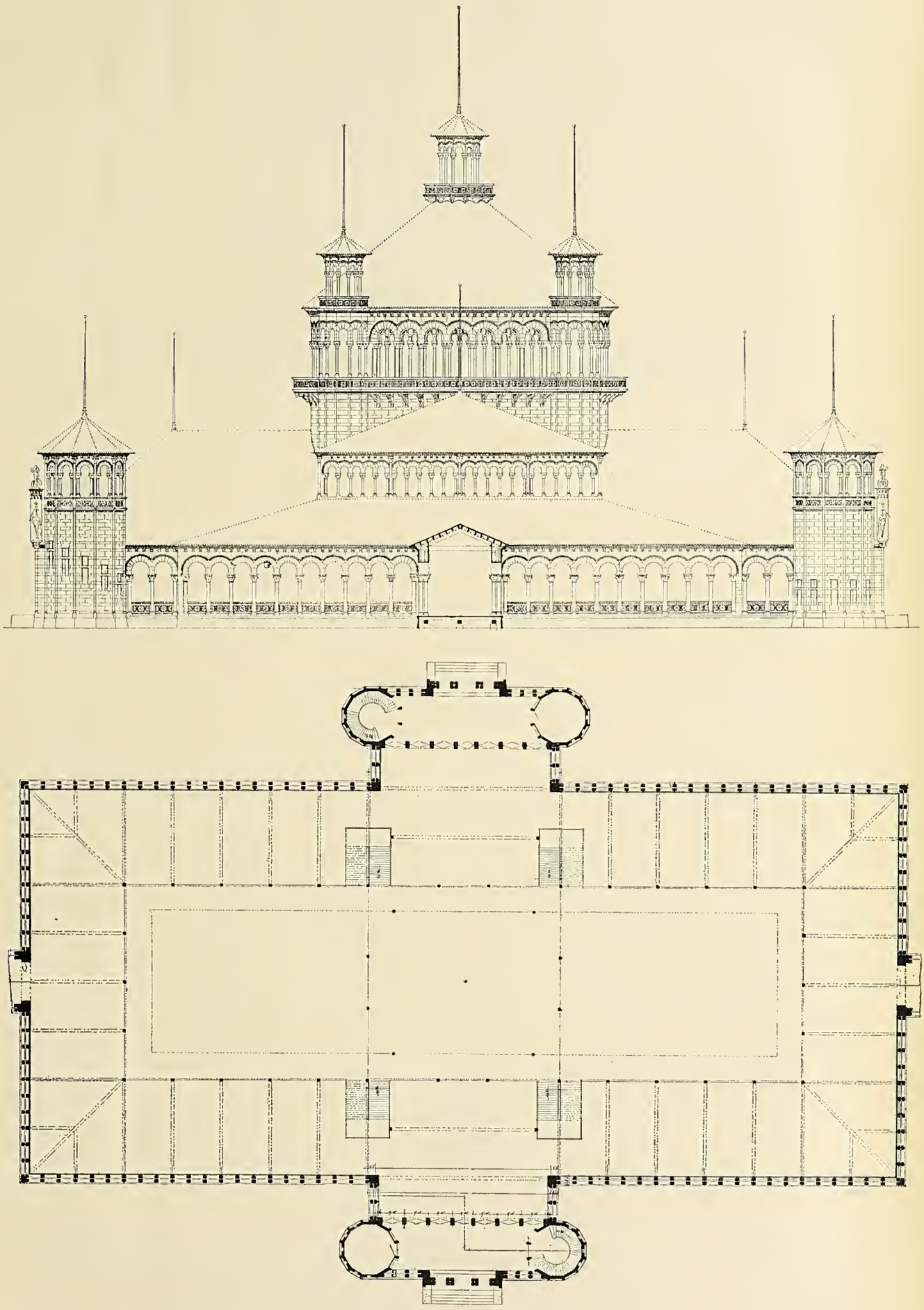


JMBIAN EXPOSITION, CHICAGO. DEPARTMENT OF CONSTRUCTION, MAY, 1891.

RCHITECT, CHICAGO.

FRONT ELEVATION OF MAIN SECTION OF FISHERIES BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO. DEPARTMENT OF CONSTRUCTION, MAY, 1891.

HENRY IVES COBB, ARCHITECT, CHICAGO.



END ELEVATION AND GROUND PLAN OF MAIN SECTION OF FISHERIES BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO. DEPARTMENT OF CONSTRUCTION, MAY, 1891.

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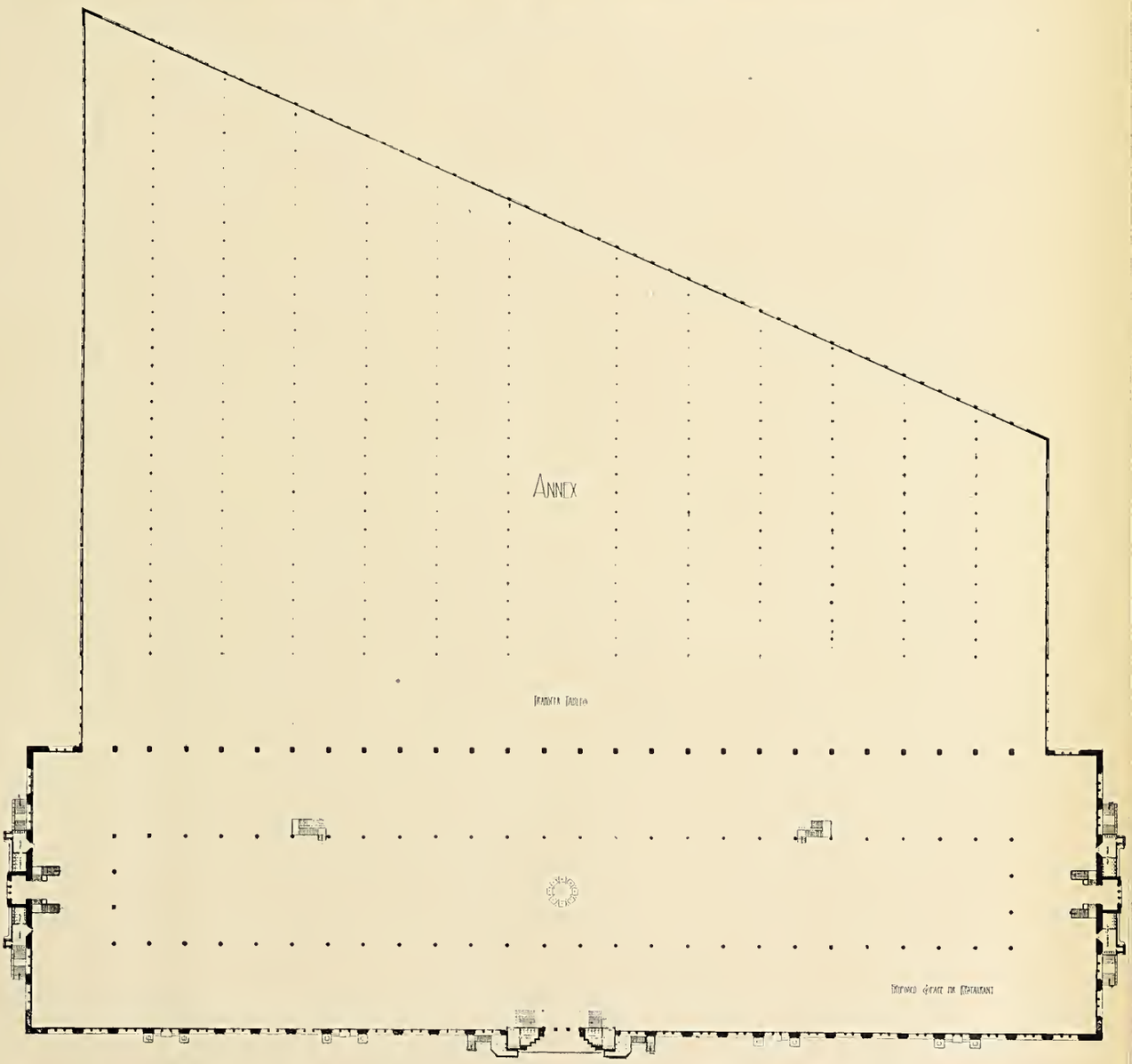

NORTH ELEVATION AND GROUND PLAN OF TRANSPORTATION BUILDING AND ANNEX, WORLD'S COLUMBIAN EXPOSITION, CHICAGO. DEPARTMENT OF CONSTRUCTION, MAY, 1891.

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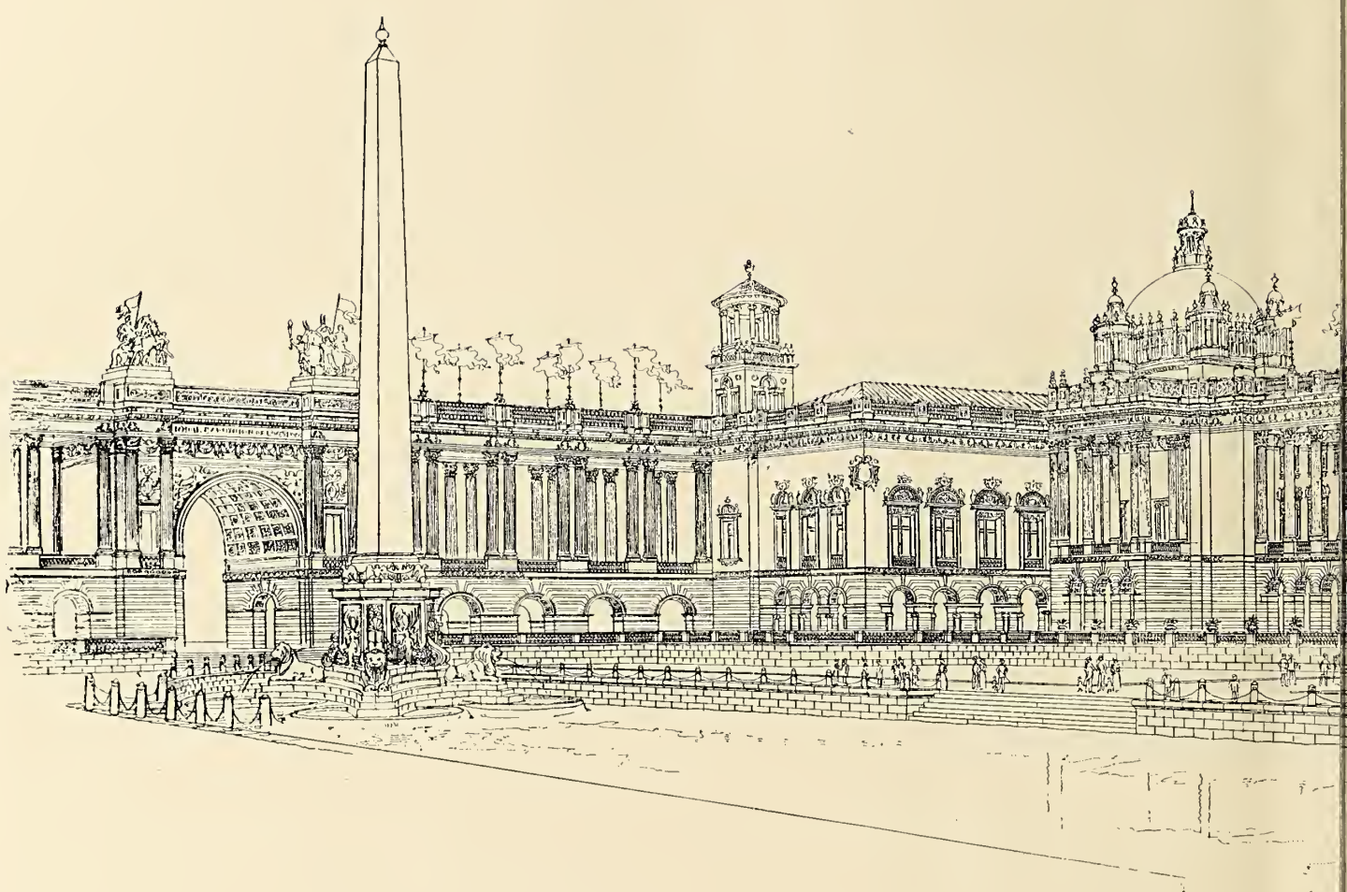

PERSPECTIVE VIEW OF EAST FRONT OF MACHINERY HALL, WORLD'S CO

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EAST ELEVATION, TRANSPORTATION BUILDING, WORLD'S COLUMBIAN EXPOSITION. DEPARTMENT OF CONSTRUCTION, MAY, 1891.

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Columbian Exposition Success and Progress.

To us at the center of activity in the preparation for the World's Columbian Exposition to learn that a prominent railroad official in England writes to a friend in this country asking "if the fair will really be held, and when," seems almost impossible. If no information had gone abroad other than the President's proclamation, the universal enterprise of the citizens of the United States should be a guarantee that the project would be carried out. But a "prominent railroad official" in England, or in Patagonia, would be supposed to read the newspapers and journals of the day, and for a year the public has been kept informed of the progress of this great movement. It is true that the jealousy of some newspapers has led them to magnify difficulties and ignore advantageous facts, and these reports, coming from the city recognized in foreign countries as the metropolis of this, has influenced many foreign journals, and through them the people have been misled; but even this should show that something was being done, and those interested in the matter could easily obtain exact information from business men of their acquaintance in Chicago. The fact, certified to by the President's proclamation, that $10,000,000 had been subscribed and guaranteed for the buildings, and additional funds since acquired in the shape of stocks, bonds, government appropriations, etc., to the total amount of $14,645,000, should be some indication that a spoon of large dimensions was in the process of manufacture, or a most costly horn was being spoiled. Adding to this the amounts that in many states will be added to, and, in some cases, doubled by the next legislatures, and the amounts raised in states by private subscription, the total amount expended in buildings and general preparation will not be short of $23,000,000. At present, out of some thirteen main buildings, costing from $200,000 to $1,000,000 each, contracts have been let for five, and the remainder will be let within the month, several of them to be finished by the first of next January. Since the different designs for these buildings were approved in February, a plot of ground, a mile and a half long by a mile wide, has been prepared for their reception. The construction department is in charge of a chief whose executive ability is recognized and relied upon, whose judgment is never questioned by his professional co-laborers, and he has surrounded himself with young men whose abilities in their several lines has been tested, and who bring an enthusiasm into the work. Under these conditions there is no room for doubt regarding the completion of the buildings in ample time for exhibits to be received and arranged before the date of opening, gigantic as the enterprise is beside all previous world's expositions. Paris, in 1889, spent $8,600,000, and covered one hundred and seventy-three acres. Here a thousand acres will be occupied, and three times the amount of money expended. Even now many of the buildings are thought to be inadequate to contain the exhibits, and recently a strong effort was made by electricians to double the size of the electric building. Plans will not be changed, however, and the exhibitors in all lines will do well to make application for space as early as possible. The department of publicity comes next in importance to that of construction. Here the best linguists, the most able writers and statisticians are organized,

to keep the world informed upon every question relating to the fair, and no prominent official in England or bone carver in the South Seas need be ignorant if he has learned to read, or can address a communication to the department.

Musical Requirements in English Churches.

A joint committee of organists and architects recently presented to the Council of the Royal Institute a report upon the musical requirements in churches, which may ultimately be issued by the Council, but possibly with amendments, the report being an ideal rather than a practical in all its recommendations. The organists upon the committee are all distinguished men of great practical experience in their profession, and especially qualified to deal with the subject. The report was submitted to the Council May 4, and ordered printed in the *R. I. B. A. Journal* prior to its consideration by them. The Council of the College of Organists were prompted to propose a joint committee through a paper read by Mr. John Belcher before the Royal Institute, upon musical requirements in church planning, and a strong committee was appointed in consequence. The committee consisted of four Fellows of the College of Organists: Dr. Martin, of St. Paul's Cathedral; Mr. Walter Parratt, of St. George's Chapel, Windsor; Mr. James Higgs and Dr. Turpin. That from the Institute consisted of five Fellows: Architects J. Belcher, R. H. Carpenter, J. D. Sedding, H. Stannus and H. H. Statham. The committee added to their number Mr. Somers Clarke, Dr. F. E. Gladstone and Rev. W. Russell, succentor of St. Paul's Cathedral, as authorities on many points of importance, and the committee also had the advantage of a conference with Mr. Micklethwaite and Mr. St. John Hope. The recommendations of the committee appended to the general report were as follows:

RECOMMENDATIONS.

1. That the organ and the choir be so placed in the church that they may most effectually assist in the services.
2. That it is essential to acoustic success that in the erection of new churches ample height should be provided for.
3. That in arranging any position for the organ, ample space should be allowed as regards area, "speaking-room," and height.
4. That no "open-flue" pipe should have less than its own speaking length (the speaking length of an "open-flue" pipe is the length from the slit or mouth above the conical foot up to the top of the pipe) above it.
5. That the organ should be concentrated, and not divided into two or more parts at a distance (excepting to place the choir organ in advance of the main instrument in the architectural design of the case).
6. That the ground space to be provided for an organ, exclusive of engines employed as blowing apparatus, should not be less than 600 superficial feet for an organ of 60 stops, of 310 superficial feet for an organ of 40 stops, and of 180 superficial feet for an organ of 20 stops.
7. That the organ should never be placed in a "chamber," but that the best position for an organ is that which has a sufficiency of open space above it and on three sides, and a solid, unpierced wall at the back.
8. That the term "organ place" be adopted, because it is more comprehensive (including gallery, etc.), and because the term "organ chamber" is misleading, inasmuch as a chamber (or enclosed place) has been determined to be *not* suitable for an organ.
9. That the internal surface of the roof above the organ should not be of wood, but of stone, plaster, or other non-absorbent material.
10. That in order to avoid noise and economize space the organ "feeders" should be placed at some convenient distance from the organ, and outside the main body of the building.
11. That the air supplied to the "feeders" must be derived directly from the church itself, in order to obtain the same temperature.
12. That the organ should be placed at a short distance from the choir, and that the best distance is about twenty feet.
13. That the organ should never be placed between the choir and congregation.
14. That the sound of the organ should not have to pass over one-half of the choir to reach the other.
15. That when possible the organ should be equidistant from both halves of the choir.
16. That the choir be placed on raised floors, or in low projecting galleries architecturally treated.
17. That the height of the platform, steps, or gallery on which the choir is placed should be regulated by the length of the church.
18. That provision should be made for the accommodation of large bodies of voices for special occasions to be seated in due musical relation to the choir and organ.
19. That it is desirable in churches of adequate size that provision should be made for an orchestra on special occasions.

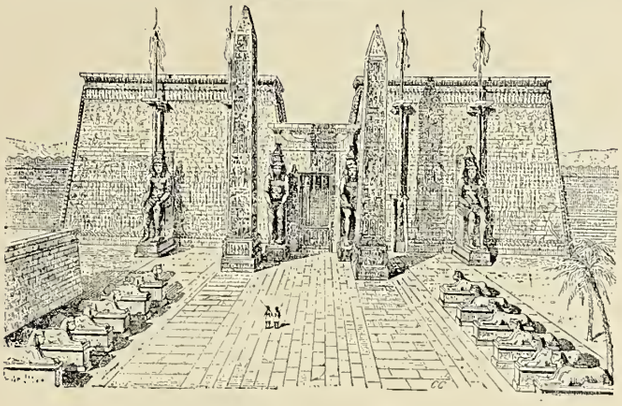
While the report deals entirely with English churches, the recommendations will apply to the construction and acoustics of all church and music hall edifices, and are valuable as the consensus of the experience of some of the best organists and architects in the world, and are equally applicable to American churches.

Organized Labor and the World's Fair.

That un-American institution, the trades union, has developed its un-American principle of curtailing or abolishing the personal freedom of the individual in a new direction, that of seeking, as far as possible, to cripple the World's Fair, and that simply because the directors could not or would not make the construction of the buildings, as they term it, a union job. The representatives of the unions in the building trades first made an arbitrary demand upon the directors, seeking to obtain their guarantee that none but union men should be employed. The directors paying no attention to this, they sought and obtained recognition in the shape of an agreement that all disputes should be settled by arbitration; but when the establishment of a minimum rate of wages was insisted upon, the directors refused to concede. At this juncture a bill was placed before the Illinois state Legislature asking for $1,000,000 appropriation for the state exhibit, and the unions sent delegates to the state capitol to endeavor to defeat the bill. In this they were partially successful, through the speaker of the house, who, seeing political capital in opposition, made every effort possible to defeat the measure, and succeeded in cutting down the appropriation by $200,000. As most of the unions in this country are managed by men who, though American citizens by act of congress, are foreign born and educated, it is not surprising that the compulsory methods of the old world are thought by them to be necessary in the new; but that they should seek to defeat the greatest national enterprise of the century in the country of their adoption, simply because they cannot control it, would be called treason in countries less enlightened and more arbitrary than ours. It does not alter the status of the case that it would be better for both contractors and workmen, as well as the "owners," if a minimum rate of wages could be established, thereby giving each contractor a basis to figure upon and each workman the assurance that their competition with each other would be upon personal ability rather than upon required compensation. Injustice can never aid a good cause, and is always an adjunct of a bad one. It is probable that the directors would have been unable to dictate to contractors regarding the wages they should pay, even if disposed to do so; but it has not helped the cause of organized or disorganized labor to attempt to arbitrarily control their action. Of course, the next argument will be a strike; but no strike in the building trades will be effective during the next two years in Chicago, as the supply of workmen will be so much larger than the demand, former strikes having already so overstocked the market as to make it exceedingly difficult for a stranger to obtain work. This is especially true in the carpenter trade, by which most of the labor upon the fair buildings will be done. As upwards of ninety per cent of the entire money expended will be represented by labor in some shape, and not ten per cent of it has been subscribed by labor, the position taken by the trades unions and their claims in the premises does not call for any further comment.

Architecture and the Allied Arts.

BY BARR FERREE, LECTURER IN THE SCHOOL OF ARCHITECTURE, UNIVERSITY OF PENNSYLVANIA.



FAÇADE OF TEMPLE OF LUXOR.
Restored by C. Chipiez.

AN architectural style is the resultant of many causes; it is made up of numerous distinctive elements all of which are necessary to the whole, and scarcely one can be considered as more important than another. If any one part of the characteristics of a style is especially marked, it is clearly the ornament and decoration that forms a large portion of its individuality. Style in architecture does not consist in ornament alone, but of ornament in connection with construction, materials, the influence of manners, customs, environment, religion, culture, government and similar elements. It is, however, so readily distinguishable as a component part of style, and styles are to a certain extent so readily determined by special modes and methods of decoration, that a study of its influence upon the development of architecture apart from its historical connection is both legitimate and interesting.

It is proposed to trace the influence of the allied arts, of painting, sculpture, enameling, work in metal and other minor forms of art that have a decorative purpose, upon the development of architecture and the special manner in which they became characteristic portions of the more important historical styles. No effort is made to condense the characteristic systems of decoration, of proportion or of coloring, of methods or of historical sequence, but simply to note the part taken by the allied arts in architecture and their importance in the formation of styles. In its broadest sense such a programme would be little short of a summary of the whole history of art, for while these elements do not constitute architecture they form so large a portion of what it is popularly considered to be that it is difficult to tell their story properly and fully without reviewing architectural history in its entirety. Such a work would be quite beyond the limits of this series of papers, and it will, therefore, be limited to the special subject in hand, the relations of the varied arts to architecture.

Unless this limitation is fully understood at the outset this sketch must appear incomplete and distorted. The arts are viewed primarily from the standpoint of architecture and their progress and development noted from this basis. It is a remarkable fact that the part taken by any form of art in architecture is not most evident at the beginning of a style nor at its close. The earliest forms of any architecture, when the monuments permit us to study its beginnings, show but a limited use of ornament of any kind. Painting and sculpture, even if in the form of carving, is rude and undeveloped, and architecture alone — the building, the construction — seems to make progress. Both painting and sculpture have a tendency to progress in a more rapid ratio than architecture. Sometimes the increase in superior technique in all three is relatively the same. This was the case in Greek art, in the golden age of which architecture, painting and sculpture were of the highest degree of perfection, and when they declined all three disappeared at the same time In the middle ages, when architecture again rose to a supreme height, the allied arts progressed in the same manner, though neither obtained the same relative rank that architecture did. While the decadence of Gothic architecture was accompanied by a similar decadence in painting and sculpture, in the Renaissance they easily surpassed architecture in point of merit, and have retained this supremacy to the present day.

Painting and sculpture both had their origin as adjuncts to architecture, and as they progressed they naturally departed further and further from it, lost their especial architectural characteristics and took more and more the form of individual arts. In noting their influence upon the development of architecture a certain amount of unevenness becomes manifest, for in many periods as painting and sculpture progressed they became less and less essential parts of the architecture. The decline of the arts in architecture is, therefore, by no means synonymous with their individual decline, and the reader will do well to remember that as they gradually become independent their architectural value and interest diminishes.

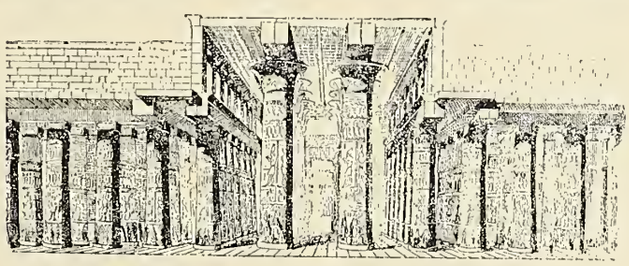
Without undertaking to chronicle the history of architecture, of sculpture or of painting, there still remain a body of facts relating to the joint history of these great arts and the minor ones developed in the history of culture. Though thus restricted to this border land that is difficult of precise definition, the field is a broad one, and a more extended treatment would doubtless bring together much more interesting data than can be found in the limits of these chapters.

PART I.

PRE-GRECIAN.

The history of architecture shows that those styles in which the union of architecture and the allied arts, painting, sculpture and various minor arts, is the most intimate, are the most successful and the most beautiful. Architecture is the oldest of the arts because it originated through the necessity of man for shelter; painting and sculpture, if the earliest rude carvings can be so designated, being first used as adjuncts to it, it is natural that the association of all forms of art should be noted from the earliest times. The broad line which has been drawn between the three great arts is of comparatively modern invention. In the golden ages of architecture, in the Egyptian, the Assyrian, the Greek, the Roman, the Gothic, all three arts were closely connected. Each had its subordinate part to play in the work, and the art of the structure consisted in the union of all. There was a balance and evenness between the parts that added much to the success of the edifice. It is this which makes the buildings of former times so generally successful, and a knowledge of the relations of painting and sculpture to architecture and the effect they had on its development is of great importance to the understanding of the true meaning of the art, and an appreciation of its greatest monuments.

The architecture of the east furnishes many splendid and rich examples of the union of the three great arts. The Orientals have an especial appreciation of the proper use of accessories, and they freely used them. Their buildings in both ancient and modern times are covered with glowing colors, and though sculpture is not highly developed it is more from a lack of technical knowledge than any disinclination for it. The further east we go the more noticeable this phenomenon becomes, the richer are the accessories, the more brilliant and vivid the colors, the more elaborate the designs. To the

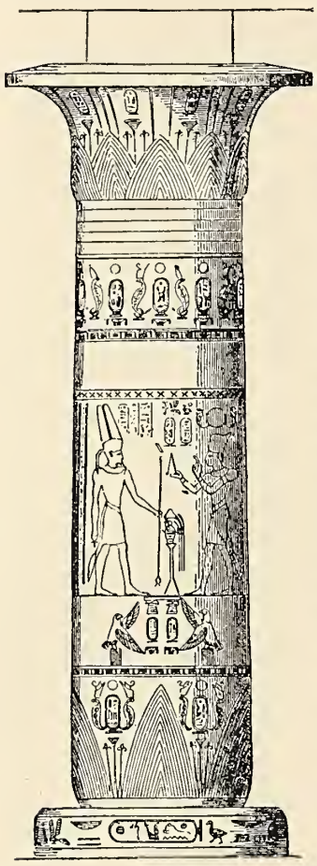


INTERIOR OF HYPOSTYLE HALL, KARNAK.
After Chipiez.

western eye the superb decorative ornament of India, China and Japan is almost bewildering. It is an integral part of the architecture, and the actual effect of a Chinese or Japanese structure is quite unintelligible without it. The natural causes of this are not far to seek. The brilliant, cloudless atmosphere of the south deprives a building of neutral tint of much of the advantages of size and form. Color is needed to accentuate it and bring it out distinct from the landscape, and give it the definite character without which any building is intolerable. A recent writer has pointed out, with great truth, that as we find the colors of birds and flowers increase in brilliancy toward the tropics, so there is an increase in the warmth of the decoration of the architecture. It is not a matter of taste, but a physical fact operating under a physical law.

The application of color to the external ornamentation of a building is dependent, primarily, upon the climate. The warm, dry, even temperature of India, China and Japan permits the use of an elaborate polychromy, and it is carried to a high degree of perfection in these countries. The designs are sometimes fantastic, the tints harsh, the execution barbaric, but the results are always splendid, and under the brilliant sky of the south are thoroughly in keeping with the

environment. The architecture of these countries is light and graceful, almost flimsical at times, judged by European standards, and hence color is necessary in order to give the character it otherwise would not possess. A similar condition is found in all the leading styles, though each worked out its development in its own way. No one art was sacrificed to another. Surfaces were not prepared that they might be covered with paintings, nor were pedestals set up for no other purpose than that statues might be placed on them. On the contrary, the universal practice of good work in previous times has been to subordinate both painted and sculptured decoration to the architecture. The buildings of the Aztecs and ancient Peruvians are an exception, for their surfaces seem to have been especially designed to receive the elaborate carvings which were characteristic of these styles. They stand, however, entirely outside the limits of the progressive history of architecture and are of importance only as showing the unsatisfactory results of building for ornament, instead of ornamenting the building.



PAINTED COLUMN.
From Rhamession, Thebes.

The Egyptians relied chiefly upon painting as an ornament for architecture. Every part of the building, the walls, both within and without, the ceilings, the columns, the capitals, the doorways, the openings, all portions, in fact, had their colored decoration. Every inch of the surface was covered with designs, figures, human and divine, representations of life in this world and the next, occupations, manufactures, arts, amusements, animals and plants and geometrical combinations. The whole story of Egyptian life, history, thought, belief was at one time or another displayed in the painted decoration of the walls. The designs were spread over the surface like great pieces of embroidery, without any attempt to accentuate the lines of the building, or to follow the forms of the architecture. Usually, instead of being painted, the picture was worked in very low relief and then colored. The general effect, however, did not differ essentially from paintings, and the Egyptian is, therefore, more than any other a painted architecture, though the art of the sculptor lay at the foundation of it all.

Doubtless the religious belief of the Egyptians was largely instrumental in determining their system of decoration. They believed in an animation of objects whereby the figured representation had a real and actual existence. In the tombs, which were as richly decorated as any structures intended for the living, the scenes on the walls had, for the spirit of the dead, as real and tangible existence as that of those who had executed them.

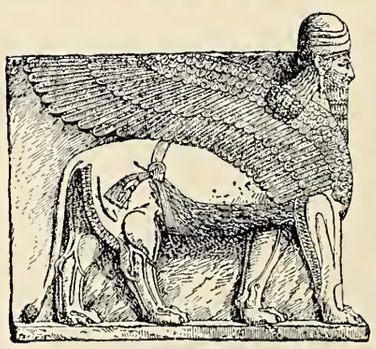
It is somewhat inconsistent with the general massiveness and stability of Egyptian architecture that the decorations should not have been made with the attention for eternity shown in the structure itself. The painted decoration was spread over a stuccoed surface which was liable to fall to pieces at any moment and seriously injure the whole design. Even when the figures were incised the color was laid over a plastered surface. Nor was this all, for as the decoration covered the entire surface of the walls without reference to construction, it was carried across cracks, joints and imperfections in the stone without regard to consequences. A new factor in disintegration was thus introduced which must have required constant care and considerable expense to counteract. In this way the architectural decoration of the Egyptians was, in a measure, independent of the structure on which it was placed. It was, however, never intended to be considered apart from it. So far as final effect was concerned the colored decoration of Egyptian buildings was quite as much an integral part of the whole as the stones of which they were built. No edifice was completed until it had been covered with ornament, and it is impossible to obtain a correct conception of the grandeur of Egyptian architecture from the dismantled and denuded monuments on which we now depend for information. The rich ornamentation changed, to a very considerable degree, the general appearance of the architecture, which in its forms and outlines was massive and gloomy, and gave it life and vitality.

From a constructive standpoint Egyptian architecture did not lack variety of form, but the free use of painting and ornament gave it an added richness and variety of surface which could not have been obtained by the use of stone alone. Sculpture played rather a subordinate part in Egyptian architecture, though not in Egyptian art. Colossi were frequently used in conjunction with the temples, and figures were occasionally applied to the outer surface of a pilaster. A capital, bearing on its four sides the head of the goddess Hathor was sometimes used. The great rock-cut temples at Ipsamboul have their façades ornamented with life-size human figures cut from the living rock and are unique applications of sculpture to architecture. It is in such instances that the Egyptians made use of sculpture. Their architectural ideas did not require statues as distinguished from bas-reliefs and they were too sound artists to manufacture places for its display.

BAS-RELIEF, SARGON.

Both painting and sculpture had their own places, and though the former was more largely used, it must not be inferred that the latter was not appreciated. Its development was hindered by the fact that it was chiefly in the form of low reliefs, and, being colored with scarcely any projection, did not differ in visual effect from painting itself. Sculptured ornament, as it is found in later styles, is comparatively rare in Egypt, possibly because the stone used was hard. Its place was taken by painted ornament. The painted decorations of the Egyptians not only included pictorial scenes from life and history, but geometrical and other ornaments, which were used, both as surface decorations and on moldings, and similar places where in other styles carved decorations were employed. Some of the tombs contain examples of painted doors and walls that are of almost unsurpassed brilliancy and wonderful complexity of design, showing that this form of art was practiced and carried to a high degree of elaboration.

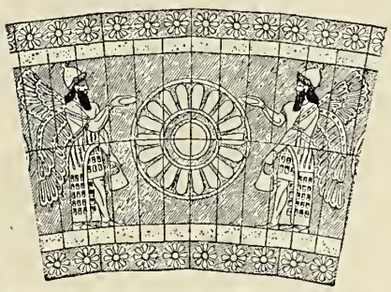
While sculpture in the form of statues was not much used by the Egyptians architecturally, it was a favorite form of art and was practiced from the earliest times. Every Pharaoh had his statue and every Egyptian who could afford it placed at least one image of himself in his tomb. In fact portrait sculpture is one of the most ancient of Egyptian arts and our museums are crowded with its remains. The phenomenal activity in this most difficult of arts — and the Egyptians exhibited a profound skill in it, producing portraits of intense individuality and frequently in the hardest stone — was due to the belief that a portrait statue would serve as an abiding place for the *double* of the soul on its return to this life. It is somewhat singular that a people who were thoroughly acquainted with the technique of statue-making did not employ it to a greater extent in architectural combinations. With the exception of the colossi and the avenues of sphinxes which formed the approach to every temple of importance it is almost wanting as an architectural adjunct, though abundantly used as statuary.



WINGED BULL.

Chaldean and Assyrian architecture depended on the allied arts for complete effect to the same extent as did the Egyptian. The

methods and substances used were different, but like the older art it was never intended to be considered apart from the accessories. The chief of these was metal, and in this respect Chaldean and Assyrian art stands almost alone in relying more on these substances than any other form of architecture. This was due to the geological nature of the country. In Chaldea the almost total absence of any building stone, and the necessary reliance on brick and clay, necessitated the employment of a different decoration than was suitable where stone was plentiful, or could be had with small trouble. A very considerable quantity of precious metals could be transported with little labor, and they formed an effective decoration. The general conditions under which they were employed have been admirably epitomized by MM. Perrot and Chipiez :



PORTION OF ENAMELED ARCHIVOLT, KHORSABAD.

"They could be used at will in flexible threads or long, narrow bands, which could be nailed or riveted onto wood or brick. They may be beaten with the hammer, shaped by the chisel, or engraved by the burin ; the variety of shades of which they are capable, and the brilliance of their reflections, are among the most valuable resources of the decorator, and the coloring principles they contain provide the painter and enameller with some of his richest and most solid tones. In Chaldea the architect was condemned by the *force majeure* of circumstances to employ little more than crude or burnt brick and bad timber ; in Assyria he voluntarily condemned himself to the limitations they imposed. By the skillful and intelligent use of metals he managed to overcome the resulting disadvantages in some degree, and to mask under a sumptuous decoration of gold, silver and bronze the deficiencies inherent in the material of which his buildings were mainly composed."

The Chaldeans and Assyrians did not, however, rely solely upon metals as a means of decoration, but employed sculpture, painting and enamel as well. Their system of sculpture as an architectural accessory differed from that used by other peoples of antiquity, owing to the materials they employed in their buildings. The soft clay of which their structures were built did not permit of any general system of sculptured decoration as in the Egyptian. A scarcity of good stone was another element in determining their method. They were forced to content themselves with an economical use of such as they could obtain, and did not do more than face the lower portions of their walls with it. It is a singular fact that an examination of the remains of Assyrian buildings shows that no general system of bonding was employed to keep these stones in position. Dependence was placed on the adhesion of the stone to the surface of the clay walls. It is obvious, that with such an imperfect method of construction it would have been impossible to make use of more than one layer of the applied stone. This was carved in figures and groups, frequently life-size, the relief being higher than with the Egyptians, and placed on a direct line with the eye of the spectator instead of being spread all over the surface of the wall. The range of subjects was scarcely as varied as the Egyptian ; and sacred figures only were carved on the exterior of buildings, while the interior decoration related to human affairs, and was concerned chiefly with the monarch and his glory. The winged bulls and lions, which guarded the more important entrances to all Assyrian structures, were monuments of great grandeur, and as guardians of the building fulfilled their object in a calm, dignified and imposing manner that has seldom been surpassed.

The walls above the sculptured base were decorated with enameled brick of various colors. Enamel had been used by the Egyptians, but not on the scale it was by the Assyrians, who, if they did not invent the art — and it is very likely they did — gave it a character and importance not found in other styles. Sometimes the walls were plain and in one tint ; sometimes a variegated design was used, and sometimes the brick was ornamented with human figures or geometrical or conventional combinations. This formed a brilliant surface and aided largely in the diffusion of light in the dark apartments of an Assyrian building.

Assyrian architecture presents us with no well preserved ruins such as we have in Egyptian art, and we must depend upon scattered fragments in order to obtain an idea of their finished effect. Enough has, however, been preserved to make clear the extent to which the allied arts were essential to its full understanding. The complete effect must have been of great brilliancy and designed to exhibit most advantageously the various decorative arts of which the Assyrians were masters. The lack of definite knowledge of the manner of roofing these structures necessarily prevents us from obtaining an accurate idea of the actual appearance of an interior, but whatever may have been the means employed it certainly was one that enabled the spectator to enjoy to the fullest the richness with which they were decorated.

One other characteristic Chaldean decoration may be mentioned, and that is the system of external decoration by grooves. This was a favorite form and gave a pleasing variety to the huge wall surfaces, which, owing to the material, they must otherwise have been without. Sometimes the wall was molded to resemble columns, at other times the grooves were straight and paneled.

The Assyrians were not satisfied with the results obtained from enameling surfaces alone, but adopted another process of enameling in relief. This was done by modeling the design on a large block of clay, which was cut up in pieces of the proper size for baking, and the design then built into position. While practiced to a considerable extent by the Assyrians, the best specimens of this decoration belong to Persian art. The finest example which has been recovered by modern research is the famous frieze of the archers which M. Dieulafoy resurrected from the façade of the *apadâna* of the palace of Artaxerxes Mnemen, at Susa, and which has been set up in the Louvre. It consists of a series of soldiers marching in profile. On the left shoulder is carried a bow, colored yellow, and a quiver, of reddish brown. Both hands grasp a pike that is tipped with a silver knob. The tunics, which are alternately of white and golden yellow, are narrow, and open at the sides, with broad sleeves. The material is spangled with green or blue daisies, or with lozenge-shaped designs, and there is an embroidered border. The turban is twisted into rolls, and is of a greenish color. The soldiers wear sky-blue leather boots, and are adorned with earrings and bracelets. The figures are exact duplicates of each other, though the colors vary. The tints are brilliant and strong and the enamel transparent and iridescent. No decoration of pottery or tiles ever approached these in superbness of effect.

ARCHER, SUSA.

Hebrew art was not sufficiently developed to exercise any considerable influence on the general progress of architecture. It was probably closely allied to the Assyrian, and in some respects it was undoubtedly so. This was in the use of metals, of which scripture gives us elaborate accounts. The sacred vessels and furniture of the tabernacle were of wood, overlaid with pure gold. The ark of the covenant was of shittim wood, overlaid with gold, and "upon it a crown of gold round about." The mercy seat was of pure gold, as were also the two cherubim of "beaten-work." The boards forming the walls of the tabernacle were overlaid with gold and coupled with bars, similarly covered, held by rings. These boards were fastened in sockets of silver. The curtains which covered the whole structure of the tabernacle were fastened with taches of metal.

The magnificence of this structure was far exceeded by the temple of Solomon. "So Solomon overlaid the house within with pure gold : and he made a partition by the chains of gold before the oracle ; and he overlaid it with gold. And the whole house he overlaid with gold . . . . And the floor of the house he overlaid with gold, within and without." (1 Kings vi, 21, 22, 30.) The adjuncts to the tabernacle and the temple were all of metal.

(To be continued.)

Tall Buildings.

ARCHITECT DANKMAR ADLER, in a letter to the *Economist* regarding a movement to secure legislation pertaining to Chicago building, protests against the proposed law upon the ground that it is unnecessary and inoperative. Pointing to the approaching greater concentration of all lines of business in the centers of great cities, which will cause a demand for still higher structures, Mr. Adler gives the following thoughts and conclusions regarding the development of the tall buildings and the necessity for carrying them to the utmost possible height.

As a participant in and an interested observer of the development of the "tall building" so characteristic of Chicago, the discussion instituted by you has brought to my mind the following thoughts and conclusions which may interest you and your readers:

First, as to the tall building considered merely as a thing to be constructed, and ignoring for the present its foundations, and assuming that the riveted steel skeleton construction must be adopted to make it a possibility in its ultimate development, I start with the statement that, floor for floor, the height of the building has no bearing upon the difficulties of the construction. By this I mean that it takes no more strength of tile arch, of I-beam or of girder, nor does it take a greater number of rivets to fasten the beams to each other or to girders or posts, nor does it require a heavier bracket or lug to carry a given floor load at the twenty-fifth story than for the same load at the second. Nor is the metal area required for a pillar of given height any greater to carry this floor load on high than to sustain under the same conditions a similar load near the ground. Again, the concentrations of load upon riveted steel pillars in the lower stories of even the tallest buildings are so far within the capacity of our rolling mills and bridge shops, the transmissions of strains downward from story to story are ordinarily so direct and within the line of greatest resisting power of the pillars, and the attachment to the pillars by the usual means of the beams and girders carrying the successive floors forms so effective a system of lateral bracings for the pillars, and thus pillars, girders and beams are, in ordinary good practice, so effectively and efficiently knit together that, as regards safety in the mere downward transmission of loads to the foundation is concerned, the design of the tall building can hardly be called a very difficult problem.

To secure under prevailing conditions the proper degree of resistance to wind pressure is a most complex problem. Assuming the weight of structural parts and the base area of the building to be constant, the destructive effectiveness of wind pressure increases with the height of the walls. The most effective opposition to wind pressure is in mere weight of structure and in base area. The increase of the former is limited by the bearing capacity of foundations, the latter by the area of the building site. Either the mere dead weight of the structure or its base area, or both combined, can be made more effective as opponents to wind pressure by thorough internal bracing of the structure, and by the general use of good material and workmanship. In a general way, however, it may be assumed that buildings covering a large area, can be made higher than those of smaller dimensions; and it may be safely predicated from this that there will be a tendency toward the acquisition by single wealthy individuals or corporations of large blocks of realty in choice localities, with a view to their utilization as sites for unusually tall business buildings. Mere dead weight being then an important aid toward resistance to wind pressure, this weight will increase more rapidly than the height of the structure. Hence increase in bearing power of foundations must be a most essential factor in the design of the taller and the tallest buildings. But neither theory nor practice of foundation construction have as yet arrived at their ultimate development. In our practice, past and present, are germs for the development of a system of foundation construction that will be competent to serve the needs of the tallest building of the future.

Neither the timber and concrete foundations of the Board of Trade and the Pullman buildings, nor the rail and concrete foundations of the Rialto, Phenix and Rookery buildings, nor the timber, concrete, rail and I-beam foundations of the Auditorium, nor the concrete and I-beam foundations of the Tacoma and later buildings are the last word. They have all served their purpose with more or less efficiency and each is an honest and intelligent effort toward the final solution of a still unsolved problem. Each carries successfully under present conditions a tall building of today. None alone is competent to carry the taller buildings of tomorrow, and still less the tallest buildings necessary to fulfill the demands of the day after tomorrow.

All of these foundations are designed upon the hypothesis that our soil is compressible, and that equal loadings per unit of foundation area produce equal settlements, and that increase of load produces increase of settlement in ratio greater than this increase of load. Experience and practice have demonstrated the correctness of this theory.

All Chicagoans are familiar with the effect upon an existing structure of the erection of an adjacent heavy building. There is not as yet an example of the erection next to an existing "sky-scraper" of another structure of the same type. Assume, however, the case of such a one, the foundations of its party walls perhaps 20 feet or more wide. Most of these are loaded over 3,000 pounds per square foot of foundation area, some nearly if not quite 4,000 pounds, and one to my knowledge even more. Assume the load on a foundation 20 feet wide to be at the rate of say 3,500 pounds per square foot, a safe low average. Suppose that a building fifteen stories high — not an excessive height as buildings go — is to be erected on the adjacent property and assume that the nearest line of supports is 18 feet distant from the party wall. Suppose that the existing building is also fifteen stories high, and that both are office buildings. You will then have the most favorable conditions. The construction of the adjacent building will increase the load per square foot of foundation area from 3,500 pounds to 4,220 pounds, sufficient to induce, as I have myself observed, an increase of settlement on the part of the already existing structure of from four to six inches. This would probably become somewhat greater at the front and rear walls where there would also be the additional load of the corner pier and half the fillings between the nearest openings.

It may be said that the old wall may be held on screws and new foundations inserted. But as the load to be held would begin with 35 tons per linear foot of wall and would end with 42 tons, and as the spread of bearing would have to be for nearest points only 24 feet, and the total width required for this operation would be almost 40 feet, of which 20 feet would have to be taken out of the completed building, this occupation of valuable space would alone constitute an almost insurmountable obstacle. And if one considers the character of a good concrete and I-beam or rail foundation, the desire for removing it to make way for another and larger one will be apt to disappear altogether.

It may be suggested that the additional load imposed by the new structure shall be carried not on the old foundations, but on cantilevers from an independent foundation within the limits of the new structure. A little reflection will show that this expedient is practicable only within rather narrow limits, far inside the requirements of the taller and the tallest buildings. Nor do I believe that Mr. Frederick Baumann's ingenious method for enlarging foundations of existing buildings can be applied under these conditions.

I know full well that in thus attacking existing methods of foundation construction I assail my own work, as well as that of my confrères. But as we are none of us perfect, so our work shares and exhibits our mental imperfections and limitations. Yet neither we nor our work should therefore be condemned. Each of us has contributed his share toward the solution of a difficult problem. Each has learned from the others and each has taught the others what to do and what to avoid, and together and all conscientiously working toward the same end we shall evolve before many years a system of foundation construction equal even on our soil to the bearing of structures perhaps thirty or forty stories in height.

Valuable contributions to the final result have been made by many, and some of these exist even in apparently unsuccessful work — work that was unsuccessful because the conditions were only partly understood. While admiring the brilliant exposition of the theory of isolated piers made twenty years ago by Frederick Baumann and since followed by all of us, we must not lose sight of the futile effort made by Mullett to produce a monolithic foundation for the United States government building, an effort which if made today with the means and knowledge now at our disposal would not have met with so ignominious a result. We should take into consideration the brilliant success of pile foundations as used under most trying conditions as supports for our grain elevators and as the substructure of the Northern Pacific Railway station. All these may be combined with each other and with other expedients not yet tried but quite applicable in Chicago soil.

Ecole des Beaux Arts.*

SINCE my first letter was written to this journal regarding the Ecole des Beaux Arts and the examinations which were in progress, these have been decided. These examinations extend over a period of about one month. As then stated, there were over two hundred applicants for admission to the school. Of these, thirteen were Americans, of whom three only were admitted, though out of one hundred and seventy Frenchmen only twenty were admitted. The remaining seven who were admitted, making in all thirty, were were Spaniards, Portuguese, etc. Mr. Howard, from McKim, Mead & White's office, in New York, stood among those admitted. At one time he was a student in the Institute of Technology, in Boston, and, later, draftsman in Mr. Richardson's office. Mr. Stoughton, another American, stood sixth among those admitted. He is a graduate of the Architectural Department of Columbia College, and has been in Paris nearly a year preparing for the examinations. Mr. Wright, of Minneapolis, who was from the Institute of Technology, made special preparation for this examination in the atelier of M. Duray, of Paris.

Fourteen or fifteen Americans will try the next examinations, on the twelfth of June, and, possibly, quite as many Frenchmen as before. At the previous examination the number admitted was limited to thirty. This time there will be a change in the programme in this respect, there having been more or less discontent expressed in regard to the large proportion of foreigners admitted. There will now be forty Frenchmen admitted, and as many foreigners as stand in marks between the highest and lowest received by the Frenchmen admitted.

It may be of interest to draftsmen and others to indicate the admissible requirements of this school. As stated in the previous letter, the prime requirement is in architectural composition and rendering, which involves a good knowledge of the orders, a fair knowledge of their use in composition, and an ordinary facility in rendering. All solutions of the problems given are in the classic or renaissance styles. The detail from memory of the order used is required of each solution. Thus, if the Ionic order is used, a detail of the Ionic base, column, cap and tablature is required. While they are not generally rendered elaborately, frequently only in pencil, they are expected to indicate the student's knowledge of the detail of the order given. Nominally, twelve hours are required for the solution of the problem given and the detail of the order. In truth, ten hours is about all the time one can expect to use, as two hours are devoted to the formality

* Paris correspondence continued from Vol. xvii, No. 3, page 47.

of calling the names of applicants, signing documents, distribution of programmes and preparation for drawing. Furthermore, the work is done in a pandemonium of howling Frenchmen, who feel it incumbent upon them to make all the noise and disturbance possible on this occasion.

The highest possible mark in architectural composition is twenty. The highest mark given at the last examination was seventeen. Mr. Howard, who stood second in composition, received sixteen. His design was conceived in a scholarly spirit and rendered in a way to do credit to a water-color artist of great experience. All who received seven or more were admissible to the other examinations, though it is well to bear in mind that the mark in architecture is multiplied by twelve in making up the general average; that in mathematics is multiplied by five, the modeling and freehand drawing by two, and in history by one.

Following the examination in architectural composition come the following: Freehand drawing from a plaster cast, to be executed in eight hours; modeling in clay in bas-relief from a plaster cast, to be executed in eight hours; written examination in arithmetic, algebra and geometry; oral examination in arithmetic, algebra and geometry; oral examination in descriptive geometry; oral and written examination in history.

The freehand drawing is from decorated casts. Sometimes an urn is used, at other times a griffin, and again, a fragment of the upper part of a caryatid, and as it is generally known that it will be one of these three, there is special preparation with reference to it. Some of the Frenchmen have been known to take all three drawings of these subjects carefully rendered into the room with them and at the end of the time to pass in the cast selected. In the examination in geometry two or three questions only are asked, so it is necessary to be well up in the entire range of plane and solid geometry in order to feel reasonably certain of getting a good mark. The examination in history is usually a very simple matter, though it is well to bear in mind that this as well as all other examinations are conducted in the French language.

The difficulties of getting into the Ecole des Beaux Arts should not stand in the way of anyone in coming to Paris to study architecture, as the means of acquiring a good academic knowledge of architectural composition and rendering are numerous and of the highest character, being, for the most part, under the general patronage of the Ecole and management of French government architects. The museum and library of the Ecole des Beaux Arts is open to all. The work of this institution is all in the classic and renaissance styles, although at the Trocadero most of the space is given to Viollet le Duc restorations of the gothic monuments of France. This includes all of the prominent cathedrals, chateaus and other structures. There is a large amount of gothic and other architectural material in the museum of the Louvre and at Cluny, and, more than all this, the splendid architectural monuments of Paris and the near vicinity.

There are several Americans in Paris who are studying architecture without the desire or expectation of getting into the Ecole des Beaux Arts. In truth it is coming to be generally recognized, among those who stop to seriously consider this matter, that one cannot expect to get the best results by entering the school unless he has three or four years to spend therein. As it may take a year or more to secure entrance, such a programme would involve four or five years. One who studies here must expect to lay all of his American ideas of practicability, picturesqueness and convenience aside for the study of an architecture which is throughly academic or scholastic. This applies not only to the composition in a general sense, but the detail, decoration and rendering; for while the different ateliers have their peculiarities of method and drawing, all are controlled by the same general formulas, which are of a high scholarly character and fill that void so lamentably apparent in our American architecture, namely, the lack of knowledge of the foundation principles of good design. A schooling in the French academic work does not necessarily imply rigidness or lack of a picturesque quality. However, it does imply a knowledge of foundation principles and practice in their application, and in the end, admits of an intelligent departure from severe lines, and composition in picturesque structures.

I send herewith the design which won the American prize in a recent competition in the Beaux Arts. It will be remembered that a few years ago certain of the Americans, recognizing the obligation which the American architects were under to the French school, raised a fund of some fifteen thousand dollars, which was invested for the purpose of contributing funds for an annual cash prize for the French students of that institution. This year the prize was won by M. Chaussemiche. The work is characteristic of the French school and has the local interest of being the outgrowth of American interest in this institution. The subject of the problem was an archæological museum, of which the following is an extract:

"This museum should be designed to receive all collections which would be of service in study of the history of ancient art. The monuments and objects of art of all kinds should be represented here by originals, castings, drawings and paintings.

"These collections should be divided in three divisions:

"In the first and most important should be placed antiquities: Egyptian, Greek, Etruscan and Roman.

"The second should contain antiquities of France from the Celtic epoque to the Renaissance.

"The third should contain objects of oriental art, Byzantine and Arabic, that of Media, Assyria, Persia, Babylonia, India, China and Japan.

"This division will be, as is readily seen, more geographic than chronological.

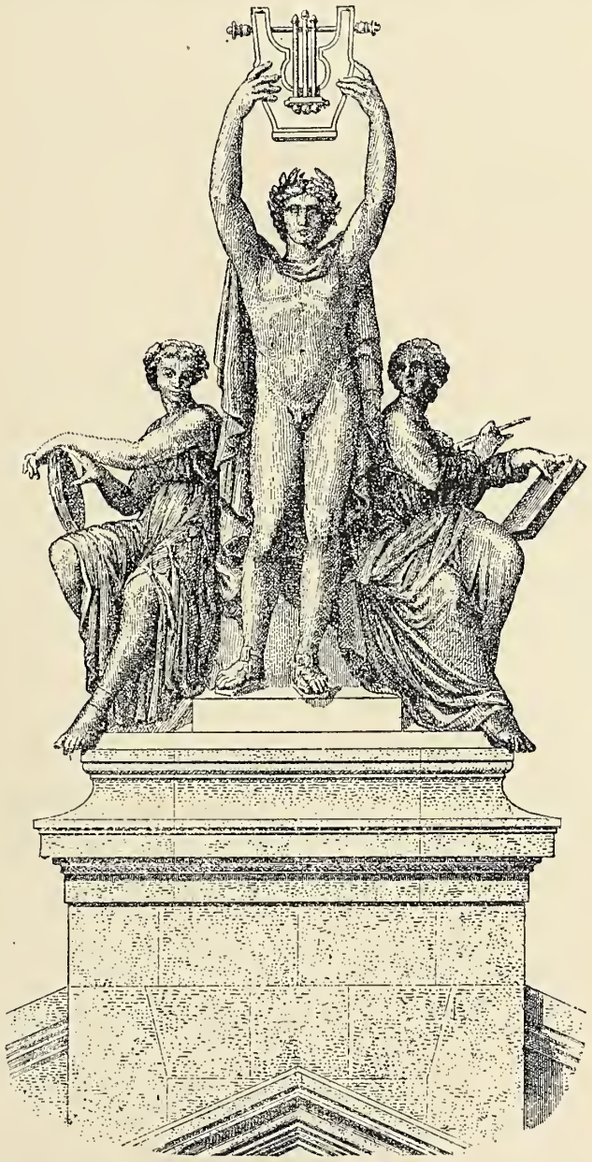
"Each of these salles should be so arranged with galleries of different dimensions, as to permit of the methodic exposition of the various objects therein contained. Such objects as are too large for exposure in the rooms should be so placed in the courts as to reconstruct, partially or entirely, the historical connection.

"In proximity to these galleries there should be several rooms for study, a library containing 50,000 to 60,000 volumes, and rooms for the professors."

PARIS, May 28, 1891. LOUIS H. GIBSON.

Notes from our French Exchanges.*

APROPOS of the recent death of Aimé Millet, *La Semaine des Constructeurs* says that he was one of those extremely rare persons, an "architect sculptor." Of all his works, the groups of Apollo, on the main gable of the grand opera house at Paris, was probably the most important, and M. Garnier, speaking of it, says: "The gable over the stage of the opera house is on the side of the main front, ornamented with three metal groups, the middle one having been executed by Millet. These three groups make, in fact, the silhouette of the building. Now it is no easy matter to compose a silhouette, and more than one sculptor of the greatest talent would have failed when an artist of less note but having the decorative feeling would succeed to perfection. I would not mean to say that Millet was a sculptor of the second class, for he has shown his right to a place in the highest ranks; I would only say that he had a veritable intuition of what decoration required, a sense so rare and valuable that for this piece of work I can almost call him a 'co-architect.'" "His studio," says M. Garnier, "was at the opera house, and I have seen him each day climb up the great ladders. It was truly a curious sight to watch this little man and true artist, by the side of the great statues, whose knees he could scarcely reach. The arms of Apollo were larger than



he himself, and I often wondered by what process of reasoning an artist could get the right proportions for the members and muscles of which he could only see a small portion at a time. However that may be, Millet accomplished his task with a most astonishing enthusiasm and courage; never rebuffed by any difficulty and recommencing without hesitation any part that seemed to him imperfect. He

*Translated and arranged by W. A. Otis, architect.

spared neither time nor pains in this great work, for which, like all artistic work, much less was paid than it was really worth. I learned during this long labor to sincerely esteem this artist of great worth, and when I think of those 'commercial' painters who only make of art a means of coining money, I am deeply touched by the loyalty and professional sincerity which animates the courageous sculptor. If the work had by chance proven bad I should certainly have even then respected the conscientious work of the artist; but being above criticism, to respect for work must be added the respect for genius."

The idea of the god holding the lyre above his head like the holy sacrament, as says Millet, is the idea of the sculptor and not of the architect, as M. Garnier confesses with his usual frankness. "In order that there may be no misunderstanding," he says, "and that honor may be given to whom honor is due, I openly declare that the idea of Apollo holding up the lyre belonged entirely to Millet. It is a very simple thing when once it has been found, but I consider it one of the spontaneous and original compositions which are not always found in works of art; and mark well that, as architect, I care less for the idea than for the outline; but the first led to the second, and I take great pleasure in acknowledging that sentimental art is also decorative art."

CATACOMBS OF THE PRIESTS OF AMMON.

The *Journal Officiel de Caire* publishes an account of the finding and exploration in Egypt of the catacombs of the priests of Ammon, which it considers one of the most important discoveries of recent years. On January 31, 1891, excavations were commenced at the east of the temple of queen Hatasou, and soon led to the discovery of a shaft about fifty feet deep, at the bottom of which appeared a door, closed by great stones placed against it. The door having been cleared, an entrance was effected into a first gallery, 215 feet long, at the end of which was a short flight of steps descending into a second and smaller gallery. These two galleries had a trend from north to south, and at the end were excavated two funeral chambers, one measuring 12 feet, and the other 6 feet. At the top of the flight of steps is a door into a second corridor, 165 feet long, running from east to west; the total extent of these catacombs being about 460 feet. They are filled with mummy cases, often piled one on top the other. At the side of each sarcophagus were placed different objects, papyrus, baskets, boxes, statuettes, funeral offerings, flowers, etc. The disorder denoted that they had been hastily concealed there, in a manner similar to the royal mummies discovered ten years ago. Both places of concealment were evidently made under the same circumstances, and in both cases the most recent mummies belonged to the twenty-first dynasty.

The sarcophagi, numbering 163, of this new discovery are principally those of the priests and priestesses of Ammon, although there are some priests of other divinities, as Anubis, etc.

The greater portion of the mummies are inclosed in three cases. The outer ones, being the only ones yet examined, are magnificent, and exceptionally rich in decorations. Upon the coffins of the priests religious representations are executed with particular care, and it is expected that Egyptologists will find a mass of new and most interesting information in this new discovery.

It is scarcely necessary to point out what use the historian will make of the genealogies and titles of a series of priests, extending through several dynasties. What surprises some of these sarcophagi may reserve! Upon many of the coffins the place reserved for the name of the deceased is blank, showing that at the moment when the mummies were concealed work was done in great haste, and that small sarcophagi, or those whose outer case had been broken, were hastily placed in new large cases taken from the storehouses, and that there was not even the time to inscribe the name, so that it cannot be known until the inner cases are opened.

Each one of the priestly mummies should have at least one manuscript, but already there have been gathered up boxes in the shape of statuettes of Osiris, containing seventy-five beautiful manuscripts upon papyrus.

In comparison with these written records, but minor importance is attached to the antiquities of various sorts that are placed about the sarcophagi, notwithstanding many of them will soon occupy prominent places in the cases of the museum. What has first to be considered is the historical interest which this discovery presents. Since excavations have been undertaken in Egypt there has never been a similar group of objects found, which could not but furnish to students accurate and ample information upon a period of several centuries in duration. The doors of these chambers, closed for three thousand years, have been opened in the presence of the officials, an inventory taken, and the sarcophagi, together with all objects found, transported with care to two large barges.

Until their arrival at Ghizeh, more extended information cannot be expected, relative to this unexpected discovery, which will enrich the Egyptian museum with an incomparable collection.

ARTIFICIAL ASPHALT — REPAIRING TERRA COTTA.

A Danish engineer, M. J. Ersleu, has recently taken out a patent for a process for the manufacture of artificial asphalt, according to *La Semaine des Constructeurs*. He mixes eighty to ninety parts of carbonate of ammonia with ten to twelve parts of coal tar, and when thoroughly combined adds one hundred parts of fine sand or dry clay; the whole is stirred until sufficiently mixed, then run off into large cakes which are used the same as natural asphalt. This artificial asphalt resists changes of temperature and even hot water; its hardness is equal to that of the natural article and it adheres perfectly to anything for which it is used as a coating.

The molded portions of terra cotta are liable to chip off or break, but accidents of this kind may be repaired by means of a cement described by *La Semaine des Constructeurs*. This is prepared by mixing twenty parts of sharp sand, one part of unslacked lime and two parts of litharge with linseed oil to a pasty thickness. The color is obtained by adding venetian red for red terra cotta, yellow ochre for the buff, or Spanish brown for the brown. After a short time this cement acquires the hardness of stone. The manner of its application will vary according to the shape of the pieces.

JEWISH ART AT THE CLUNY MUSEUM.

The Hotel Cluny has just been enriched by a new collection of nick-nacks classed in the catalogue under the title of "Hebrew Objects of Art." Madam Baron Nathaniel de Rothschild presented these jewels and pieces of furniture to the museum of French antiquities, having secured them from the curious collection of Mr. Isaac Strauss, who was better known to the Parisian public as the leader of the orchestra at the opera balls, than as a collector of works of art. A tablet commemorative of this gift of Madame de Rothschild has been placed in the room where this collection is exhibited. The public cannot but be obliged to the donor for seeking to make known what Jewish art was in the sixteenth to the seventeenth, and even in the fifteenth century, but what will be the results for us of this exhibition?

"The Jews," says Lebon in his History of the Earliest Civilizations, "possessed neither arts, sciences or trades or anything which really constitutes a civilization. They have never brought the smallest contribution to the building up of human knowledge; never have they passed beyond that state of semi-barbarism of the peoples who have no history. If they ended by finally possessing cities of their own, it is that the conditions of existence in the midst of neighbors, arrived at a higher degree of civilization than themselves, rendered such cities a necessity.

But their cities, their temples, their palaces the Jews themselves were totally incapable of building, and at the time of this greatest power and prosperity, during the reign of Solomon, they were obliged to hire foreigners as architects, workmen and artists, since none then existed in the bosom of Israel." Truly when one examines without prejudice this new exhibit at the Cluny, one is almost forced to agree with this writer.

In fact what is there to be seen here? Some small boxes covered with a series of little squares framed with gilded moldings, which contain sculpture more or less similar to the panels of the French flamboyant style. These boxes, we are told, are reproductions of the ark of the tabernacle. This is pretty hard for the ark, since the commonest of our packing boxes are scarcely less artistic!! Near to the ark in the antique room, where used to be seen the exquisite fireplace with tiles colored by Bernard Palissy, is now placed a desk called the reading desk of the officiating priest. It is decidedly poor in workmanship and thoroughly Jewish. In the middle of the room is a nine-branched candlestick of a shape which is undoubtedly priestly but nevertheless decidedly disagreeable. It is said to be a reproduction of the famous golden candlestick of the temple of Jerusalem. Judging by this sample the cathedral of Solomon the Great must have been furnished in a style to suit the most plebian taste. In like manner one might criticise the movable altars, the tables of the law, and some German napkins ornamented with figures, neither of man or beast; and behold that is all that this "glorious collection" of Jewish art contains. Certainly none of our designers or carvers will go there to seek models, at least such should be the wish of all who desire anything in the least degree artistic.

International Congress of Hygiene and Demography.

THE Seventh International Congress of Hygiene and Demography will meet this year at London, England, from August 10 to 17. The special subjects to be considered by Section VI of the congress — "Architecture in Relation to Hygiene," are as follows:

I. — LAYING OUT AND EXTENSION OF TOWNS.

A. — Reservation of Open Space. — For purposes of light and air; for means of communication; for recreative and ornamental purposes.

B. — Streets and Ways. — Alignment; width of roadways and footways; paving; boulevards; subways; business thoroughfares; shops; arcades; markets; mews; street refuges; public conveniences; line and height of building frontages; projections.

II. — BUILDINGS.

Site; aspect; curtilage; materials; exclusion of damp and ground air; basements and areas; roofing; collection and storage of rain water; water supply; sanitary appliances; drainage; external and internal surfaces; walls; floors; ceilings; partitions; lighting, natural and artificial; ventilation; heating by hot air, hot water and steam; open fireplaces; close stoves; consumption of smoke.

C. — Private Dwellings. — I, self-contained houses; II, residential flats.

D. — Dwellings Partly or Wholly used in Common. — I, artizans' and laborers' dwellings. II, common lodging houses.

E. — Trade Premises and Workshops. — Restaurants; bakehouses; dairies and milk shops; cow sheds; stables and mews; laundries.

F. — Public Buildings. — Hospitals; infirmaries; asylums; educational institutions; gymnasia; places of worship; theaters; public halls; hotels; courts of justice; prisons; police stations; coroners' courts; mortuaries; markets; abattoirs; baths; wash-houses.

All communications relative to this section should be addressed to Ernest Turner, Esq., 246 Regent street, W. Foreign correspondence to be addressed to Doctor Corfield, honorary foreign secretary, 20

Hanover square, W. In matter relating to the general business of the congress, letters should be addressed to Doctor Poore, the honorary secretary-general, 20 Hanover square, W.

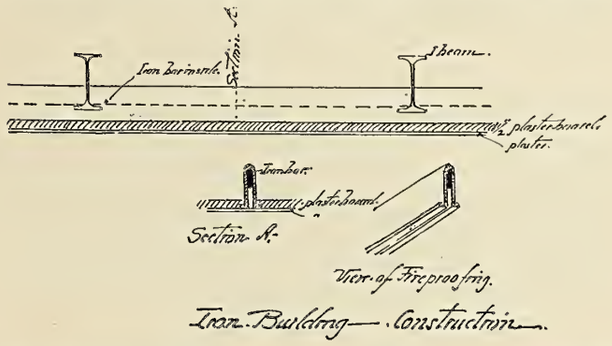
The meetings of Section VI will be held in Burlington house, Piccadilly, London, on Tuesday, Wednesday, Thursday and Friday, August 11, 12, 13 and 14. Abstracts of all papers to be read in the section must be furnished to the honorary secretaries not later than June 15, and the full text of the papers before June 30. Abstracts of papers should not exceed five hundred words, and should be typewritten, to insure accuracy in printing and translation. Papers and abstracts may be written, and speeches in the meetings delivered in French, German or English. No paper will be received which has been previously published or communicated to any other society. A limit of fifteen minutes will be fixed for a paper or speech introducing a subject, and a limit of ten minutes for all subsequent speeches or papers on the same subject.

Fire Test of a New Fireproofing Material.

SOME five years ago attention was directed to a new method of finishing walls which had been in vogue in Germany for many years. The composition was plaster or gypsum combined with reeds, which gave the molded form stability and lightness. The method was brought to this country by Mr. Frederick Keppler, an architect of considerable local prominence and popularity, who finally abandoning the profession has since devoted himself to its manufacture and application. This was accomplished in the formation of the Mackolite Plaster Board Company. The first work placed was in the East, such architects as McKim, Mead & White, George B. Post and Peabody & Stearns using it extensively as a covering for walls and ceilings as a superior substitute for lath and plaster. The high fireproof quality of mackolite was soon recognized, and it soon became a competitor with the well-known forms of porous terra cotta, and has recently been adopted by architects from New York to San Francisco. It is in Chicago that its first application to the larger class of steel structures was made. In the Monadnock, an eighteen-story office building now under construction, all the partitions are of mackolite porous terra cotta, it having been previously used in the Illinois Bank building. It should be a material much sought for on account of lightness for partitions in fireproof buildings, as the heights to which they are now built make the weight of material an important factor.

To demonstrate its efficiency in cases of fire and its ready application not only to iron and steel structures, but to the various common forms of balloon and frame wood construction, at low cost, a test was made by the Mackolite Company of Chicago, on June 4, and deemed of sufficient importance to be recorded in detail for the benefit of those who make use of this material.

There was erected upon the lake shore, at the foot of Ohio street, two small structures, one entirely of iron frame, and one of ordinary



wood "balloon" frame, such as is commonly used in the West in the building of frame dwellings. Each structure was eight feet square and ten feet high, with a sloping roof.

The iron building was constructed without a floor. The walls were of mackolite hollow tile, four inches thick, attached to the iron studding; and covered with a suspended ceiling of mackolite one and one-half inches thick, upon which the ordinary plaster course was laid, thus protecting the iron frame in every part.

The frame building had a floor composed of ordinary flooring, deadened by one and one-half inch plaster boards laid upon 2 by 10 joists, and the ceiling had three inches of plaster board above the joists, one inch plaster board below laid upon 2 by 6 joists. Upon the south side of the frame structure a double course of three-fourths inch plaster boards was laid upon 2 by 4 studding on the inside only, while on the east and west sides the studding was protected upon the inside by a double course of inch plaster boards and on the outside by a single course of inch plaster board. The north side was built of three-inch mackolite hollow tile in sections eighteen inches by three feet.

These houses were built about the middle of May and were thoroughly weather-dry at the time of the test.

The houses were designed as they were to show the effect of fire in a single room, as most fires start in this manner, the application of the mackolite in each structure was in every way similar to its application in the building, and though small, were in every way suitable to the purpose.

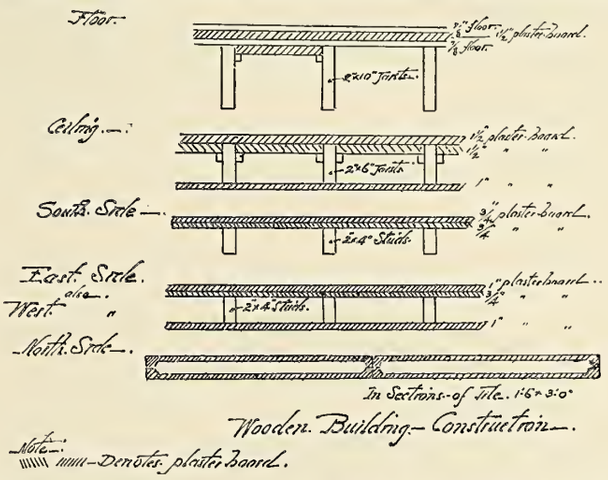
On the date mentioned, Mr. R. N. Trimmingham, Secretary of the Chicago Fire Underwriter's Association, and a committee of his association, a representative of the fire department detailed by Chief Swenie, and a large number of architects and others interested in the development of methods of fireproofing, met and were escorted to the scene of the test.

When all was ready about a quarter of a cord of dry, hard beech wood, which had been stacked in the inside of each house and saturated with coal oil, was fired. An intense fire was raging in each structure in a few minutes, and was maintained with unabated intensity by the addition of fresh wood for two hours.

Each interior had been covered with a quarter-inch coat of brown plaster which peeled off and dropped away a few moments after the starting of the fires, leaving the mackolite immediately exposed to the full fury of the flames.

So far as the iron structure was concerned, no effect was produced in any way on any of the ironwork, either in the sides or the suspended ceiling. Nor were the three-inch mackolite tile forming the four walls of the structure destroyed or thrown out of position.

By reference to accompanying sketches, it will be observed that the 2 by 4 studding forming the frame of the wood structure were simply protected on sides and ceiling by single or double layers of mackolite boards, nailed onto the wood in the usual manner of placing this material. Unusual interest was manifested in this structure,



and predictions were freely ventured by the spectators that it could withstand the fierce flames but a few minutes. The accompanying photogravures — one showing a view of both structures taken before the fire, and the other after it had been burning in each with uninterrupted fury for one hour and fifty minutes — show how much at variance this judgment was with accomplished results. These results would seem to indicate the possibility of building wooden houses in which, at a cost little, if any, in excess of prices for current methods of construction, a fire would surely be confined to the place of its origin. There would not probably ever be found in an ordinary room an amount of combustible material equal to half of the beech wood burned to ashes in this eight-feet-square room. No attempt was made at any time to quench the fire or abate its fury; on the contrary, both fires were fed from time to time with fresh fuel to continue their intensity. This ability to confine a fire to the room of its origin is the aim of all fire-proof construction, and if it is now placed within the reach of the home builder at moderate cost, a boon is indeed conferred upon him.

Foundations From Side of Wall Line.

FREDERICK BAUMANN, architect, of Chicago, to whom architects are much indebted for valuable hints and data upon foundation construction, has recently planned a new and simple method of providing old foundations, as they are, with broad bases in order to fit them for tall buildings. In a circular accompanied with an attached diagram, Mr. Baumann explains his method as follows:

The erection of a modern tall building alongside or between walls of old buildings, is oftentimes met with serious difficulties, the neighbor being unable or unwilling to vacate the adjoining cellar for the purpose of tearing out and reconstructing the foundation.

Such cases, in particular, come under my method, which is illustrated on the adjoined sheet. Operations are had on one side only, and no disturbance of any kind is caused to the neighbor. A place along the wall is excavated, about five feet long, and eighteen inches — or thereabouts — below its base. A layer of dry concrete is spread, and four 15-inch I-beams, fitted with bottom plates, are set in position and carefully pushed, by means of two horizontal hydraulic jacks, under the base-stone, to lastly reach four feet beyond the opposite edge of the stone. The spaces between beams are made solid with proper concrete. The process is then proceeded with at both sides of the first spot, and so on, till the ends of the wall have been reached, which ends may be especially fortified in various ways. On this new iron base the additional thickness of the wall can be started and continued up as indicated, with material and with care suitable for the occasion.

The sketch on the adjoined sheet shows the case of a party wall. The construction does not materially differ in case of an independent wall. A height of about 175 feet from the base is assumed. Less or more height, of course, requires a narrower or broader base, as the case may be. Beams 12, 20 or even 24 inches deep may come in demand.

The process does not weaken the ground below the base of old foundation, on the contrary, it slightly compresses it. Proper concrete between the beams, at their other end, ought to make this part of the new base absolutely solid and efficient for carrying the load to be put on.

The method has been sufficiently tried on a smaller scale to assure success in every case. It is covered by letters patent.

Mr. Baumann exhibited his method at a recent meeting of the Chicago chapter of the American Institute of Architects.

Our Illustrations.

The new German Theater, Chicago; Adler & Sullivan, architects.

Public Library for Kalamazoo, Michigan; Patton & Fisher, architects, Chicago.

Examples of artistic wrought-iron work executed by the Winslow Brothers Company, Chicago.

Office Building, D. O. Mills, of New York, at San Francisco, California; Burnham & Root, architects, Chicago.

Perspective view of Transportation Building, World's Columbian Exposition, Chicago; Adler & Sullivan, architects.

Detail of exterior and interior of main entrance to Horticultural Building; W. L. B. Jenney and W. B. Mundie, architects.

Perspective view of Horticultural Building, World's Columbian Exposition, Chicago; W. L. B. Jenny and W. B. Mundie, architects.

Two views of demonstration before Chicago Board of Underwriters of fireproof value of Mackolite plaster boards and hollow tile.

End elevations and main façade of Horticultural Building, World's Columbian Exposition, Chicago; W. L. B. Jenney and W. B. Mundie, architects.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

The Kirkland school building, Chicago; J. L. Silsbee, architect.

Residence of Wirt Dexter, Chicago; Arthur Little, architect, Boston.

Houses for John Norcott, Jr., Chicago; Frederick W. Perkins, architect.

University School building, Cleveland, Ohio; C. F. Schweinfurth, architect.

Residence of James P. Gardner, Kenwood, Chicago; Thomas Hawks, architect.

Block of houses, for Mrs. F. M. Dow, Chicago; F. Baumann & J. K. Cady, architects.

Building for the Young Men's Christian Association, Cleveland, Ohio; C. F. Schweinfurth, architect.

Association Notes.

COLORADO ASSOCIATION OF ARCHITECTS.

The first annual meeting of the Colorado Association of Architects was held at the Colorado Club, Denver, May 4, and the following officers elected for the ensuing year:

President, F. H. Jackson; vice-president, John W. Roberts; secretary, E. R. Rice; treasurer, James Murdoch; directors — F. E. Edbrooke, chairman, R. S. Roeschlaub, R. G. Balcom, A. M. Stuckert, J. J. Humphreys.

The meeting was followed by a banquet, at which Mr. Sterner, of Varien & Sterner, presided. Other architects present were: F. H. Jackson, J. W. Roberts, E. R. Rice, James Murdoch, F. E. Edbrooke, Robert S. Roeschlaub, Henry Dozier, W. A. Mareau, H. W. Kirchner, E. J. Hodgson, E. J. Carr, R. G. Balcomb, F. Goodno, R. Pugh, C. S. Thompson, William Long, J. J. Huddart, J. B. Dorman, T. J. Boal, John J. Humphreys, V. E. Baerresen, H. W. Baerresen, E. B. Gregory, E. P. Varien and A. M. Stuckert.

A unique feature of the banquet was hand-painted menu cards designed by members of the Denver Architectural Sketch Club, which were auctioned off by the chairman to the amusement of the guests and profit of the club, to which the proceeds were given.

EDINBURGH ARCHITECTURAL ASSOCIATION.

About fifty members of the Edinburgh Architectural Association visited Newhall House, Brunstane Castle, and Penicuik House, on May 9, under the leadership of Architect Hippolyte J. Blanc.

The party drove from Penicuik to Newhall House, where they were cordially received by Mr. John Blair, W. S., and his family, who are the present tenants. It was explained that the present house was begun early in the eighteenth century by Sir David Forbes, the then proprietor of the estate, and that it had by a series of subsequent additions and alterations become expanded to its present commodious residential dimensions. Mr. Blanc explained further that the site had been occupied by a monastery, and afterward by one of the feudal castles of the Crichton family, but no traces of either of these establishments now exist. The appearance of the house as erected by Sir David Forbes and his son was shown by illustrations, and the progressive stages of building to the present time explained. Reference was made to the interest attaching to the house from its having been the rendezvous of the distinguished patrons of Allan Ramsay, who assembled to hear that author's recitation of his charming pastoral poem. Mr. Blair kindly conducted the party over the house, interest in the interior of which centers in the collection of portraits of Ramsay and his patrons, chiefly by Aikman.

Proceeding to Brunstane Castle, a ruined edifice of the sixteenth century, Mr. Blanc noted that from a very early period it also belonged to the Crichton family. The arrangements of the several apartments were traced, and the special architectural features explained. The party next visited Penicuik House, permission having been previously obtained from Dowager Lady Clerk.

Mr. Blanc in his paper traced the successive owners of the Penicuik estate down to the distinguished family whose descendants now occupy it. He further explained that the house was built in 1761 by Sir James Clerk, the third baronet, who, it is said, also designed it. There are, however, strong traces of the hand of Robert Adam, architect, who was related by marriage to the proprietor. After explaining the plan and general features of the house, Mr. Blanc conducted the party to the interior, where they viewed the very interesting collection of portraits by Aikman and others. Some interesting relics were also seen, among them a fine cabinet of Roman antiquities. The visitors next assembled in the drawing-room, where much interest was felt in examining the splendid decorations upon the ceiling, the work of Alexander Runciman. The subjects depicted are from scenes in Ossian's poems, this circumstance obtaining for the apartment the name of Ossian's Hall.

A vote of thanks was accorded to Mr. Blanc for his papers, as also to the various proprietors, to whom the association were indebted.

The annual meeting of the association was held May 28, in the Architectural Hall, Mr. John Kinross, president, in the chair. The annual report stated there were 289 members on the roll, and that there was a balance in the treasury of £185. It was moved, seconded and adopted

That the Edingburgh Architectural Association, while it greatly deplores the need for considering the question of surrendering any further portion of the Princess Street Gardens, hereby expresses its agreement with the compromise indicated in the letter of the Town Council to the North British Railway Company, of May 21, and respectfully urges on the Lord Provost, Magistrates and Council to adhere to the declarations therein contained.

After delivering his valedictory address, the chairman read a paper on "Modern Church Architecture."

New Publications.

SELECTED DETAILS OF INTERIOR AND EXTERIOR FINISH, for Architects, Carpenters and Builders. Thirty-two plates. New York: William T. Comstock, 1890. Price $5; sent by mail, free of postage, to any part of the world.

This 14 by 18 book, comprising over thirty pages, brings together various details that have previously appeared in the different publications of Mr. Comstock. Many of them are given a larger scale than before printed, and the collection covers a very considerable variety of useful subjects—interior residence finish, and mantels, predominating. Unfortunately, several of the plates are either considerably out of date, or else by persons not generally familiar to the architectural profession. But the great majority of the work is by men of such distinguished ability as Bruce Price, Rossiter & Wright, Schweinfurth, etc., so that it is, upon the whole, a collection unusually worthy of study by draftsmen and designers seeking after really good and refined examples. Usually the size of the plates is such as to clearly bring out the finer moldings, but if not, a larger detail of such portions is ordinarily given.

PANTOBIBLION, a monthly bibliographical journal; St. Petersburg, Russia; A. Kersha, C. E., editor. D. Appleton & Co., New York.

There has reached the table of The Inland Architect the first number of a monthly magazine published at St. Petersburg, Russia, bearing the comprehensive title of *Pantobiblion*, A. Kersha, C. E., editor. The publication of such a journal indicates a spirit of enterprise that is truly refreshing in its originality and unlooked for from that quarter of the globe. Indeed it smacks of Yankee smartness, and only differs from it in the degree that the publishers have been quicker to discern an open and untouched field in magazine literature than their proverbially cute brothers. The character of the periodical and its object will be understood when it is stated its contents are and will be an international bibliographical review of the world's scientific literature, with the text matter printed in all of the modern living languages. The initial number contains critical reviews of the leading articles in the chief scientific periodicals; short notices of interesting current scientific facts; twelve hundred titles of publications, besides an index of two hundred and seventy periodicals devoted to the applied sciences and technical specialties, not to mention other kindred matter. Branch offices have been established at London, Paris, Leipzic, Bologna and New York. The New York office is with D. Appleton & Co., the well known American publishers. It would seem that the *Pantobiblion* must receive a liberal patronage from those whose life duties make such information as it affords invaluable, and who must have felt a thousand times the need of just such a helper. The yearly subscription is named, 24s, post free.

Personal.

Architects Park & Fuller (Horatio T. Park and Alexander Fuller) have established offices at 119 Dearborn street, Chicago.

Mr. William Morgan Peters, known to the profession as one of the most tasteful and practical designers of interiors in the country, has consolidated his furnishing and decorating business with that of the Carsley & East Manufacturing Company, of Chicago, becoming a director of the company, and giving to that already strong combination of furnishing and decorative ability an added strength that will be appreciated by architects in the execution of the interiors of residences, or other buildings, to their complete furnishing.

Legal Notes.

MECHANIC'S LIEN — AGENCY OF HUSBAND.

Where a husband constructs a house upon land owned by his wife, of which fact she has full knowledge, the agency of the husband will be presumed and the property will be subject to a mechanic's lien. Bradford *vs.* Peterson, Supreme Court of Nebraska, 46 N. W. Rep., 220.

EXTRA WORK UNDER BUILDING CONTRACT.

A contractor entered into a contract with a church corporation to erect a church edifice. The contract provided that no extra work should be paid for except upon a certificate of the superintendent and building committee. A sub-contractor did some extra work under the oral direction of a portion of the building committee, for which he seeks to recover. The sub-contractor was chargeable with notice

of the provision of the contract and cannot recover in the absence of the certificate it called for. Shaw *vs.* First Baptist Church of Winona, Supreme Court of Minnesota, 46 N. W. Rep., 146.

GUARANTY IN OBTAINING CREDIT.

Certain contractors threatened to give up a contract on account of inability to obtain supplies, the superintendent gave them a letter to plaintiff who furnished the supplies, charging to defendant and informed the superintendent that he was furnishing them solely on defendant's credit. Afterward, when the job was completed, the defendant's superintendent claimed the goods still on hand. The defendant's promise to pay was not that of a mere grantor and not within the statute of frauds. Hagadom *vs* Stronach Lumber Company, Supreme Court of Michigan, 45 N. W. Rep., 650.

JOINT BUILDING CONTRACT.

When one contracted with an architect to furnish plans for a building, and told him that he and his father-in law were building it together, and the architect so entered it in his books, the contract is a joint one and the defendant is not liable on a several recovery. Van Leyen *vs.* Wieford, Supreme Court of Michigan, 45 N. W. Rep., 1116.

TIME FOR FILING MECHANIC'S LIEN.

Under that provision of the mechanic's lien statute which limits the time for filing a lien to a specified time after the completion of the work, the limitation commences to run when the work is actually completed, and the fact that part of it is to be done over, does not extend the commencement of the limitation to the time when such work is done to replace defective work, but the limitation commences at the time the work was first completed. Harrison *vs.* Women's Homeopathic Hospital Association, Supreme Court of Pennsylvania, 19 At. Rep., 604.

SERVING NOTICE OF MECHANIC'S LIEN.

When one claims a mechanic's lien, and it appears that the materials furnished were used in the erection of the building on which a lien is claimed, unless it is shown that they were intended for another purpose, it will be presumed that they had been contracted for to be used in the building. The Kansas statute giving sixty days to file claim for lien and give notice of same to owner, does not require the notice to be given within the sixty days, but only that the lien shall be filed within that time and the notice given within a reasonable time after such filing. Deatherage *vs.* Henderson, Supreme Court of Kansas, 23 Pac. Rep., 1052.

MECHANIC'S LIEN AS AFFECTED BY ASSIGNMENT OF PROFITS.

Where one enters into a contract for the erection of a building, and assigns to a bank a certain portion of the money which should be due after payment of the lien upon the check, and afterward assigned another portion of the moneys due under the contract to another party subject to a prior transfer at the bank, the second party also having a right to a mechanic's lien as a sub-contractor. The assignment of the moneys due did not wipe out the right of lien, but the party cannot claim by both. Moran *vs.* Murray Hill Bank, Superior Court of New York City, 9 N. Y. S., 715.

CONSTRUCTION OF PARTY WALL CONTRACT.

Where a contract for the erection of a party wall provides that a person on whose land it is to be partly built shall not have the right to obstruct the light from any window which the other party shall build into said wall, such other party has by implication the right to build windows in such wall. Where by mistake such party wall is built entirely upon the land adjoining that of the builder, a promise by the owner of the land upon which it is built to pay one half the cost thereof is a good consideration for a new contract as he is under no legal obligation to pay for it. Grimley *vs.* Davidson, Supreme Court of Illinois, 24 N. E. Rep., 439.

Synopsis of Building News.

Buffalo, N. Y.—Architect W. H. Archer: For the Young Men's Christian Association at Tonawanda; a brick and stone building, all modern improvements; to cost $40,000.

Chicago, Ill.—Architects Thomas & Rapp have closed contracts for a high school to be erected at the corner of East avenue and Lake street, Oak Park, for the board of education of school district No. 1, Cicero. It will be a three-story and attic, the first story being of cut stone and superstructure of buff pressed brick, with trimmings of Bedford stone. The design is an unusually handsome one, with gables, dormers, etc.; the cost will be $50,000. For George Enger, of Cincinnati, they are preparing plans for two four-story factories, 80 by 100 feet each; to cost $50,000. They will be erected on Shields avenue, near Twenty-seventh street. For H. B. Smith, on the southeast corner of Vincennes avenue and Fortieth street, a four-story apartment house of pressed brick, terra cotta and brownstone, steam heat, etc.; to cost $45,000. For Mrs. Cook, on Ellis avenue, near Thirty-eighth street, three three-story residences of pressed brick and stone fronts. For G. D. Holton, on Drexel boulevard, north of Forty-third street, a residence of buff Roman brick with stone trimmings; cost $35,000.

Architect W. G. Barfield: For Dr. F. D. Clark, at 333 and 334 Michigan avenue, a handsome ten-story apartment building; to cost $150,000. The first two stories will be of granite, and above this will be of buff Bedford stone. It will be of steel construction and entirely fireproof, with tile ceilings, walls, iron stairways, steam heat, electric light, elevators, etc. He is now working on plans. For Love & Ayer on Forty-fourth street and Lake avenue, he planned six residences; to cost $38,000. They will have stone fronts, hardwood interiors, hot-water heating, etc. For Zemasky Brothers, on Cottage Grove avenue, near Thirty-first street, a four-story store and flat, to have stone front, copper bays, etc.; cost $12,000. For C. Chamberlain, on Washington boulevard, near Francisco street, a residence; to cost $10,000. Stone front, hot-water heating; making plans.

Architect William Strippelman: For John M. Smyth, on Madison street, near Halsted, an eight-story store, 205 by 180 feet; to cost $250,000; steam heat, six elevators, electric light plant, etc.; the mason work will be done by A. Collender; carpenter work by William Goldie & Son; plumber, Thomas Conlon.

Architects Flanders & Zimmerman: For Coope, Riddle & Co., at Aurora, a four-story store and office building of cut stone, terra cotta and plate-glass front, steam heat, electric wiring, hardwood finish, marble and tile work; cost $50,000. A three-story school, 75 by 150 feet; of pressed brick, stone and terra cotta front, steam heat, slate roof; to cost $45,000; to be built corner of Fifty-seventh and School streets. A three-story and basement school, 50 by 125 feet; to cost $35,000, on the northeast corner of St. Lawrence avenue and Forty-fifth street; pressed brick, stone and terra cotta, steam heat, etc. For W. Foster, at Glencoe, a residence; to cost $11,000. For J. B. Mallers, corner of Market and Quincy streets, a ten-story warehouse, 42 by 114 feet; to cost $150,000; making plans; steam heat, elevators, etc. For J. Schnewind, at La Porte, Ind., a residence; to cost $7,000. For J. N. Borden, corner Market and Harrison, a four-story flat building; to cost $40,000; pressed brick and terra cotta front. For the same owner, a seven-story warehouse, 30 by 125 feet; to cost $50,000; Jefferson street, near Van Buren; pressed brick and stone, steam heat, elevators, etc.; making plans.

Architect Henry Ives Cobb has completed plans and is now taking bids for the sixteen-story office building to be erected at 98 Washington street for the Cook County Abstract Company; the first four stories will be of Bedford stone and above of terra cotta or pressed brick; steam heat, electric light, seven elevators, etc.; size 60 by 182 feet; cost about $600,000.

Architects Edbrooke & Burnham: For W. B. White, northeast corner Grand boulevard and Boulevard place, a three-story residence of buff stone and brick, with tile roof; cost $30,000. For G. F. Gosman, at Kenilworth, a three-story frame residence.

Architect R. G. Pentecost: For Ed. Mandel, four three-story stone front residences; to cost $60,000.

Architect Clinton J. Warren: For Joseph Dee, at 60 South Fulton street, a three-story office building. For Louis Wolf, on Dearborn street, next door south of the Chemical Bank, remodeling five-story building into a first-class, modern eight-story office building; new front of buff brick, with terra cotta of the same color, electric light, steam heat, elevators, marble and mosaic work; cost about $150,000. Also just broke ground for the Lexington Hotel, northeast corner of Michigan avenue and Twenty-second street; two fronts of Roman brick and terra cotta.

Architect W. H. Drake: For George C. Hutchinson, at 456 Milwaukee avenue, a four-story store and flats, of Vert Island red sandstone front, red slate turrets, etc.; to cost $35,000. For Mrs. D. Ratté, at 1518 Wabash avenue, a four-story store and flats; to cost $30,000; Bedford stone front, steam heat, gas ranges, etc. For F. G. Walker, southeast corner of Wabash avenue and Congress street, a four-story carriage warehouse, 80 by 165 feet; to cost $35,000. For W. S. Payne, at 2409 Wabash avenue, a four-story laundry, and at 2411 a four-story flat building for Hon. H. F. Waite.

Architects J. M. Van Osdell & Co.: For L. C. P. Freer, northeast corner of Fifth avenue and Randolph street, remodeling and adding one and a half stories and converting present building into a first-class, modern office building; pressed brick, terra cotta, copper bronze, four elevators, steam heat, electric light, etc. Making plans for James Casey, northwest corner of Madison and Union streets, a six-story hotel; to cost $40,000; pressed brick and terra cotta, elevators, steam heat, marble and mosaic work. For H. N. Hobart, on Wrightwood avenue and Hampden Court, a two-story residence; to cost $40,000; cut-stone front, hardwood finish, hot-water heating, marble work, etc.

Architect S. S. Beman: For the trustees of St. Luke's Hospital, a six-story apartment house, of light-colored pressed brick and terra cotta, hardwood interior, elevators, electric light; size 100 by 120 feet; cost $125,000; making plans. Also preparing plans for three-story residence on Michigan avenue, near Eighteenth street; blue Bedford stone front, hot-water heating, slate roof, etc.; cost $35,000. Also preparing drawings for the Pullman repair shops, to be built at St. Louis; there will be seven buildings; pressed brick and stone fronts, steam heat, electric light, iron roofs, etc.; cost $200,000.

Architects Holabird & Roche: For Chicago Real Estate Trustees, a thirteen-story office building, 50 by 110 feet, to cost $350,000, on the site occupied by the Vienna bakery on Washington street; the front will be of St. Louis granite brick, with terra cotta trimmings and high roof of red tile. The design shows a handsome building in the François premier style of architecture. The interior will be finished in red oak, marble wainscoting, mosaic floors, have electric light, steam heat, four elevators, prismatic sidewalks; a novel feature will be stairway rails, screens and elevator cabs, all to be made of aluminium. The first story will be 15 feet high, second 12 and the others 11½ feet. Work has already commenced, and the building will be completed by April 1, 1892. The name of the building has not been decided on yet.

Architects Treat & Foltz are preparing plans for the new Wesleyan hospital to be erected on the northeast corner of Dearborn and Twenty-fifth streets. There will be four distinct buildings connected by corridors—the style of architecture being in the early French renaissance—showing handsome four-story structures in pressed brick with stone and terra cotta trimmings; the cost will be about $225,000. A fuller description with perspective will be published in a future number of THE INLAND ARCHITECT.

Architect Oliver W. Marble: For George C. Watts, on Forty-sixth street and Ellis avenue; three two-story residences, to have stone fronts, hardwood finish, furnaces, etc.; cost $30,000. For Messrs. Taylor, Allen & Co., on Washington avenue and Fifty-first street; seven three-story stone front residences; electric light, gas fixtures, furnaces, tile vestibules, stained, plate and beveled glass, etc.; cost $70,000.

Architect J. A. Miller: For Richard Peck, twenty residences of Bloomington stone fronts at Eggleston; cost about $7,000 each. Will also begin plans at once for twenty more.

Architect Francis J. Norton: For H. B. Orchard, corner Dearborn avenue and Division street, a five-story apartment house, 33 by 125 feet; to cost $100,000. Bedford stone front; steam heat, elevators, copper bays, electric light, gas fixtures, gas ranges, steam engine, dynamo, marble wainscoting, etc.

Architect Charles S. Frost: For the Chicago and North-Western Railway Company at Fond du Lac, a handsome suburban station; of pressed brick and stone, with slate roof and copper trimmings and pretty tower; inside finished in oak and all improvements; cost $14,000. For the same company at De Kalb, Illinois, a similar station; to cost $14,000. For the Chicago, St. Paul, Minneapolis & Omaha Railway Company at West Superior, a neatly designed station of brown sandstone; to cost $10,000. For the Lake Shore Company, at Grand Rapids, Michigan, a handsome building for station and office purposes, to be of pressed brick and stone; copper trimmings, slate roof, steam heat, all conveniences; cost $18,000. For the Chicago & North-Western Railway Company at Glencoe, a station; of pressed brick and stone; cost $10,000. For William G. Hibbard, on Calumet avenue and Eighteenth street, a handsome residence; stone basement, pressed brick and terra cotta front; cost $18,000. At Rockford, Illinois, a six-story store and office building; exterior of brown pressed brick, brownstone, terra cotta, copper cornice; interior to have hardwood finish, steam heat, elevators, electric light, etc.; to be erected corner of Main and Chestnut streets.

Architects Park & Fuller: For C. J. Harmon and L. Stover, a two-story flat building of 100 feet frontage on Howard street; to cost $15,000. St. Louis pressed brick and stone, pine finish, furnaces, etc. For J. W. Rowley, at 1279 Adams street, two-story flats; to cost $9,500. For W. H. Bussey, at Irving Park, frame flats; cost $9,500.

Architect George Beaumont: For Jarvis & Conklin, on the southwest corner of Wellington avenue and Halsted street, six two-story residences, to have stone fronts, hardwood finish, furnaces, electric work, etc.; to cost $30,000.

Architect J. E. Scheller: For Mrs. L. La Berge, at 153 W. Madison street, a five-story apartment house; cost $25,000. Granite, with copper bays, hardwood finish, steam heat, marble and mosaic work; making plans. For Joannes Brothers, at Green Bay, Wisconsin, a four-story building; to cost $30,000; granite front, hardwood finish, steam heat, elevator, etc.; letting contracts. For the Joliet Opera House Company, a four-story store, office and theater building; to cost $60,000; pressed brick, stone and copper front; steam heat, electric light, marble and tile work, etc. This was a competition, and Mr. Scheller's plans were adopted as being the most suitable.

Architects Patton & Fisher: Preparing plans for the Armour Industrial School, to be erected on Armour avenue and Thirty-fourth street; it will be five-story and basement, 66 by 225 feet in size and cost $150,000; brownstone, pressed brick, terra cotta, slate roof, etc. It will be a very handsome structure, a full description and perspective of which will appear in a later number of this journal.

Architect Julius Speyer: For Ed. White & Co., on Michigan avenue, near Fourteenth street, a five-story apartment house, 75 by 171 feet; to cost $100,000; the front to be of buff Roman brick and stone, hardwood interior, steam heat, marble and mosaic work, etc.; making plans. For C. J. Herbert, at 220 Laflin street, remodeling; to cost $15,000. For E. Parker, on Fifty-seventh and Indiana avenue, a two-story residence; stone front, hardwood finish, furnace, etc.; to cost

$10,000. For John McNally, at 2643 Portland avenue, three-story flats of Bedford stone front; to cost $7,000.

Architects Huehl & Schmid: For Prof. Louis Kretlow, at 401 Webster avenue, a three-story dancing academy, 48 by 100 feet; to cost $22,000; hydraulic pressed brick and Bedford stone front, hardwood finish, steam heat, electric light, tin shingles, etc. For Mrs. Gils, corner of Oakley avenue and Jackson street, a three-story residence of Bedford stone front; to cost $10,000.

Architect Perley Hale: For J. & J. C. Beifeld, five three-story residences, to have stone fronts and cost $40,000; to be built on Calumet avenue, south of Fortieth street; making plans. For Allan McCollough, on State, south of Eighteenth street, five-story store and flats; to cost $50,000; stone front, hardwood finish, steam heat, etc.

Architect C. C. Miller: For Mr. Winters, on State street, corner of Fifty-seventh street and Court place, four-story store and flats, 152 feet front; to cost $60,000; making plans. For Wm. J. Wilson, on Canal street, between Adams and Jackson, a five-story warehouse, 146 by 101 feet, to cost $60,000; steam heat, two elevators, etc. Also just sent out plans for First Presbyterian Church, 100 by 150 feet; to cost $60,000; to be built at Helena, Montana; rockfaced stone front and tower, steam heat, hardwood finish, stained glass windows, bell, organ, etc.; secretary, N. J. McConnell.

Architect L. G. Hallberg: For Dr. C. S. Smith, on Oakland Crescent, four Bedford stone front residences; to cost $25,000. For George S. Seaverns, on Wabash avenue, near Fiftieth street, six Bedford stone front residences; to cost $35,000.

Architect Frederick Ahlschlager: For Fred S. Espert, at 231 East Kinzie street, a four-story warehouse; to cost $15,000. For T. L. Sommer, on School street, near Fifty-eighth, a frame residence; cost $6,000. For Frank Kittler, two frame houses; to cost $7,500.

Architect John T. Long: For Chicago, Rock Island & Pacific Railroad, station at Morgan Park, of red brick, terra cotta and stone: cost $16,000. Central Park Presbyterian Church; to cost $30,000; Bedford stone, steam heat, slate roof, oak finish, etc. Methodist Episcopal church at Fort Atkinson, Wisconsin; to cost $15,000; pastor J. I. Hartley. Methodist Episcopal frame church at Merrill, Wisconsin; to cost $10,000; W. H. Flett, chairman of committee. For J. W. Tubbs, on Twenty-second street and Wentworth avenue, three-story flats and stores, to cost $25,000; making plans.

Architect J. A. Thain: For Dr. E. G. Hirsch, at 3612 Grand boulevard, a Bedford stone front residence, to cost $22,000. For Adolph Loeb, at 3622 Grand boulevard, a three-story stone front residence; to cost $20,000. For Louis Morris, corner of Polk street and Ashland avenue, a three-story, semi-detached residence of blue Bedford stone front and side; to cost $40,000. Also making plans for three-story residence, to have hot-water heating, slate roof, brownstone and pressed brick; cost $25,000; on Greenwood avenue, near Forty-fifth street; and on Greenwood avenue, near Forty-sixth street, a frame residence; to cost $20,000.

Architect A. W. Cole: For Grenada, Mississippi, a three-story school of pressed brick and stone, yellow pine, slate roof, etc.

Architect W. L. Carroll: For Mrs. Alice M. Kirby, four-story flats, on Superior street, of St. Lawrence marble front; to cost $30,000.

Architect E. R. Krause: For Henry Schoellkopf, on Clark street, near Chicago avenue, a four-story store and flats; to cost $25,000.

Architects I. K. and A. B. Pond: For H. E. C. Daniels, at Evanston, a frame residence. For H. C. Porter, at Rockford, Illinois, a pretty frame residence; stone basement, hardwood interior, furnace, etc.

Architect C. M. Vail: For R. J. Bennet, at Ravenswood, a two-story Young Men's Christian Association building, 97 by 80 feet; of St. Louis brick, Bedford stone and terra cotta coping, yellow pine finish, steam heat; will put in bowling alley, gymnasium, etc.

Architect Thomas Wing: For Mrs. William J. Knight, a four-story store and flats, on southeast corner State and Forty-fourth streets; stone front; cost $26,000. For Mrs. Mary C. Page, next door to above, a four-story double store and flats of stone, Roman pressed brick and terra cotta.

Architect E. M. Newman: For N. D. Little, a four-story apartment building, on Sixty-first street and Madison avenue; Tiffany pressed brick, with rockfaced brick trimmings, steam heat and all improvements; cost $60,000.

Architect W. T. Lesher: For Williams & Co., corner Gœthe street and Dearborn avenue, a four-story apartment house of St. Louis pressed brick and granite trimmings, steam heat, etc.; cost $60,000. For B. Mercil, on Madison street, west of Oakley avenue, a four-story flat of St. Louis brick and Connecticut brownstone, yellow pine finish, etc.; cost $30,000.

Architect J. N. Tilton: For J. B. Waller, on Bellevue Place and Rush street, a four-story store and flat building of Bedford stone, first story, and above of pressed brick and stone, with copper bays; cost $16,000; making plans. For William D. C. Street, on Schiller street, near Astor, a three-story residence; to cost $8,000. For R. A. Waller, at Buena Park, two frame residences; to cost $8,500.

Architect August Maritzen: For the Citizens Brewing Company, corner of Archer avenue and Main street, a brewery; to cost $250,000; it will be of pressed brick and stone front, of fireproof construction, of handsome design, with a tower 130 feet high, and have a capacity of 100,000 barrels. For Messrs. Glueck & Son, at Minneapolis, Minnesota, new brewhouse, stockhouse, etc.; to cost $75,000. For the City Brewery, at Eau Claire, Wisconsin, a stockhouse, kiln and malthouse. For Price & Wimmer, at St. Cloud, Minnesota, a new stockhouse. For Winter Bros., at Pittsburg, Pennsylvania, a stockhouse, brewhouse with two kettles of 350 barrels capacity, etc.; cost $150,000. For the American Brewing Company of Chicago, a new beer depot at Crown Point, Indiana. For Fred Schring, at Joliet, a two-story brick and stone icehouse. For Glab Bros., at Dubuque, Iowa, new stockhouse, ice machine and washhouse; cost $40,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall: The season's work is progressing satisfactorily, I think, alike to both owner and builder. There are no strikes, and the time of the mechanic is well occupied, and no doubt many an humble home is made bright by the earnings of the father. Right here allow me to express the wish that there were more public reading-rooms and libraries and fewer saloons, which would change and ameliorate the condition of labor, as well as enlighten and broaden ideas. It has been justly said that "education is the keystone of the arch of political economy of nations." Why can't our philanthropic capitalists look carefully at this matter and act, and by their acts of philanthropy build a monument for themselves to be seen by all men?

Architect H. E. Siter reports: For Charles G. Merrill, a residence; materials, frame, shingles, shingle roof, hardwood finish, furnaces, wood mantels, stained glass, gas fixtures, plumbing, etc.; cost $5,000. For William Beck & Son, a store building (remodeling); materials, pressed and common brick, blinds, gas, plumbing, tin roof, furnace, mantels, etc.; cost $4,000. For the Fifth Presbyterian Church: A church edifice; materials, stone, brick, slate roof, hardwood pews, furnaces, stained glass, etc.; cost $20,000.

Architects S. Hannaford & Sons report: For Lewis Seasongood, a residence; materials, brick, plaster, gables, slate roof, hardwood finish, gas, plumbing, furnace, mantels; cost $20,000.

Architects Crapsey & Brown report: For Robert Peebles, Ashland, Kentucky, a residence; materials, frame, slate roof, pine finish, blinds, mantels, laundry fixtures, plumbing, gas, stained glass, etc.; cost $4,500. For the Methodist Episcopal Church (South), Marysville, Kentucky, a church edifice; materials, pressed brick, stone, slate roof, stained glass, hardwood finish, organ, furnace, mantels; cost $20,000.

Architect James W. McLaughlin reports: For Pickering Hardware Company, an addition to their store building of two stories; materials, pressed brick, iron, tin roof, hydraulic elevators, plumbing, gas, etc.; cost $20,000. For Home of the Friendless, an addition of four stories in rear of present building; materials, brick, stone, tin roof, pine finish, furnace, etc.; cost $10,000.

Architect M. Rumbaugh reports: For the Methodist Episcopal Church (South), Ashland, Kentucky, a church edifice; materials, brick, slate roof, hardwood finish, organ, pews or chairs, furnace, stained glass, etc.; cost $20,000.

Architect S. S. Godley reports: A church parsonage for the Glendale, Ohio, Presbyterian Church; materials, frame, slate roof, blinds, furnace, grates, mantels, etc.; cost $4,500.

Architect A. O. Elzner reports: For Mrs. L. B. Gibson, a warehouse; materials, common and pressed brick, asphalt roof, freight elevator, etc.; cost $20,000. For J. A. Gray, Covington, Kentucky, a store and flat building; materials, pressed brick, stone, tin roof, blinds, gas, plumbing, wood mantels, grates, etc.; cost $7,000. For a Mrs. Miller, a residence; materials, pressed brick, tin roof, blinds, gas, plumbing, stained glass, hardwood, laundry fixtures, etc.; cost $15,000.

Architect G. W. Drach reports: For Mrs. H. Drehme, a residence; materials, stone, terra cotta, slate roof, gas, plumbing, stained glass, wood mantels, furnace, laundry fixtures, etc.; cost $15,000. Also for the same party, a residence; materials, pressed brick, plaster, slate roof, gas, plumbing, furnace, stained glass, etc.; cost $8,000.

Architect John H. Boll reports: For Jacob Krummel, a residence; materials, pressed brick, tin roof, furnace, pine finish, stained glass, etc.; cost $3,500.

Architect Theo. Richter, Jr., reports: For Frank Kirchner, a residence; materials, pressed brick, cement gables, slate roof, hardwood finish, stained glass, laundry fixtures, gas, plumbing, etc.; cost $6,000.

Architects Des Jardins & Hayward: Two residences for Leopold Burckhardt; materials, pressed brick, frame, stone, terra cotta, gas, plumbing, grates, mantels, furnaces, etc.; cost $14,000.

Architect Lucian F. Plympton reports: For E. J. Murdock, a residence; materials, frame, slate roof, blinds, grates, wood mantels, plumbing, etc.; cost $4,500.

Denver, Colo.—Architects Baerresea Brothers: For G. C. Corning, a three-story hotel building, brick with stone front.

Architects F. E. Edbrooke & Co.: For Davis & Cresnell, a two-story brick foundry; cost $10,000.

Architect J. J. Huddart: For Mrs. Cleveland, a two-story brick dwelling; to cost $15,000.

Detroit, Mich.—Architect Leon Coquard: For Sts. Peter and Paul's Cathedral on Adelaide street, a three-story schoolhouse; size 110 by 96 feet; brick and cut stone trimmings, twelve class-rooms and hall, to seat 1,200 people; cost $40,000.

Architect Peter Dederichs: For John Mark, a block of stores on the corner of Russell and Riopelle streets; pressed brick, stone trimmings; cost $25,000. Also for M. Beyer, a two-story, pressed-brick dwelling, on Chestnut street; cost $7,000.

Architects E. A. Walshe & Son: For Dr. D. McLeod, a two-story brick residence and office on the corner of Aubin avenue and Maple street; cost $5,000. For E. R. Wills, South Bend, Indiana, a two-story residence; brick and stone; cost $6,500. For Dr. J. Black, a two-story residence on Russell and Kirby avenues; brick and frame; cost $6,000.

Architect George E. Depew: For William M. Heazlett, a two-story brick residence and barn on Warren avenue, near Hastings street; cost $14,000.

Architects Mason & Rice: For the Newberry estate, a five-story double-brick store on Jefferson avenue and Randolph street; cost $40,000. For Mrs. Nancy C. Avery, a two-story brick residence on Eliot street, near John R. street; cost $30,000. For Lewis H. Jones, a two-story residence on Warren avenue, near John R. street; brick, with cut stone trimmings and slate roof; cost $7,000. Also they are preparing plans for alterations and additions to the residence of James E. Scripps on Trumbull avenue, near Grand River avenue.

Architects Spier & Rohn: For Charles Knorr, a block of three-story brick stores, corner of Gratiot and Meldrome avenues; cost $12,000. For the Bethel German Church, a brick church, size 45 by 100 feet, on Medbury and Gratiot avenues; cost $7,000. For Mrs. Charles H. Smith, a three-story brick residence on Frederick and Brush streets; cost $7,000.

Architect Gordon W. Lloyd: For the St. Mary's hospital, an addition to building; size 160 by 40 feet; cost $50,000.

Architect Albert E. French: For the First Presbyterian Church Society, Kingsville, Ontario, a brick church to replace one recently destroyed by fire; cost $6,000.

Architects A. C. Varney & Co.: For Mrs. Alice M. Petette, a two-story brick residence on Congress, near Aubin street; cost $8,000. For William E. Moss, a two and a half story residence on Alexandria avenue and Third streets; cost $9,000.

Architects Van Leyen & Hackett: For W. H. Beamer, a two-story frame residence on Piguette avenue, near John R. street; cost $5,500. For the Detroit Baseball Club, a grand stand; cost $5,000. For Matthew Slush, at Mount Clemens, Michigan, a three-story frame residence; cost $8,000. For Frederick W. Kellogg, a two-story residence on Kirby avenue, near Woodward; pressed brick; cost $9,000.

Architect Mortimer L. Smith: For Stephen Baldwin, six two-story residences on Adams avenue, corner Brush; cost $12,000.

Architects Gearing & Stratton: For Levi Barbour, remodeling residence on west side of Woodward avenue; cost $8,500. For William H. Reid, a two-story brick residence on Park street, near Sibley; cost $5,500.

Architects Donaldson & Meier: For the Brush estate, a four-story building on Monroe avenue and Brush street; size 46 by 106 feet; brick; cost $28,000. For Anthony P. Petz, a two-story brick flat building on corner of Gratiot and Elmwood avenues; cost $12,000. For John P. Huckestein a two-story brick residence on Congress street, between Dubois and Aubin avenues; cost $6,000.

Architect A. B. Cram: For the St. John Episcopal Church, plans for improvements on building, which is to be enlarged and redecorated at a cost of $10,000.

Lima, Ohio.—Architect Charles D. Leech: For Mr. W. Stahl, a two-story frame dwelling, slate roof, furnace; size 38 by 50 feet; cost $5,000. For Mrs. Eliza Satherwaite, a two-story brick dwelling; size 34 by 36 feet; cost $3,700.

Milwaukee, Wis.—Architect Charles Kirchoff, Jr.: For the Miller Brewing Company, an eight-story storage house; to cost $150,000. Also has prepared plans for a three-story hotel for the J. Schlitz Brewing Company, the building to be of brick, and cost $22,000.

Architects Van Ryn, Andree & Lesser: For Pritzlaff Brothers, an office building; size 50 by 100 feet; brick, stone trimmings; cost $16,000.

Architects Ferry & Clas: For Matthews Brothers, a six-story brick store and office building; size 100 by 110 feet; brown stone front; cost $140,000.

Architects Siepold & Wiskocil: For the West Bend Brewing Company, an office building, to be of brick with stone trimmings.

Minneapolis, Minn.—The following buildings are reported: The St. Joseph Catholic Church, additions and alterations; to cost $9,000.

D. P. Jones, a frame dwelling; $7,500. For L. Robins, a flat and store building; cost $15,000. D. Bassett, a two-story brick building addition; cost $9,000.

Architect A. Maritzen, Chicago: For M. Glick & Sons, a four-story brewery; brick and stone; to cost $75,000.

Omaha, Neb.—Architects Findlay & Shields: For W. R. Homan, a two-story apartment house; size 44 by 150 feet; brick and stone; cost $20,000.

Architect F. M. Ellis: For C. E. Bates, a two-story residence; size 38 by 56 feet; brick and frame; cost $10,000.

Architects Voss & Lateuser: For A. Hospe, Jr., a four-story warehouse; size 44 by 732 feet; brick; cost $15,000.

Paris, Ill.—Commissioners of Edgar County want plans for court house, to be submitted by June 29. Address F. M. Patteson, Paris, Illinois.

Pittsburgh, Pa.—Architect Maritzen, Chicago: For M. Winter & Bros., a three-story manufacturing building; cost $100,000.

St. Paul, Minn.—Architect C. A. Reid is preparing plans for a large arcade building, three stories high, to be erected on Wabash near Sixth street; cost to be about $2,000,000.

Messrs. Deffel & Zimmerman will erect a two-story brick double residence; cost $10,000.

St. Louis, Mo.—Architect A. Maritzen, Chicago: For Griesedick Brothers, A four-story brewery, size 309 by 275 feet, brick and stone; cost, $300,000.

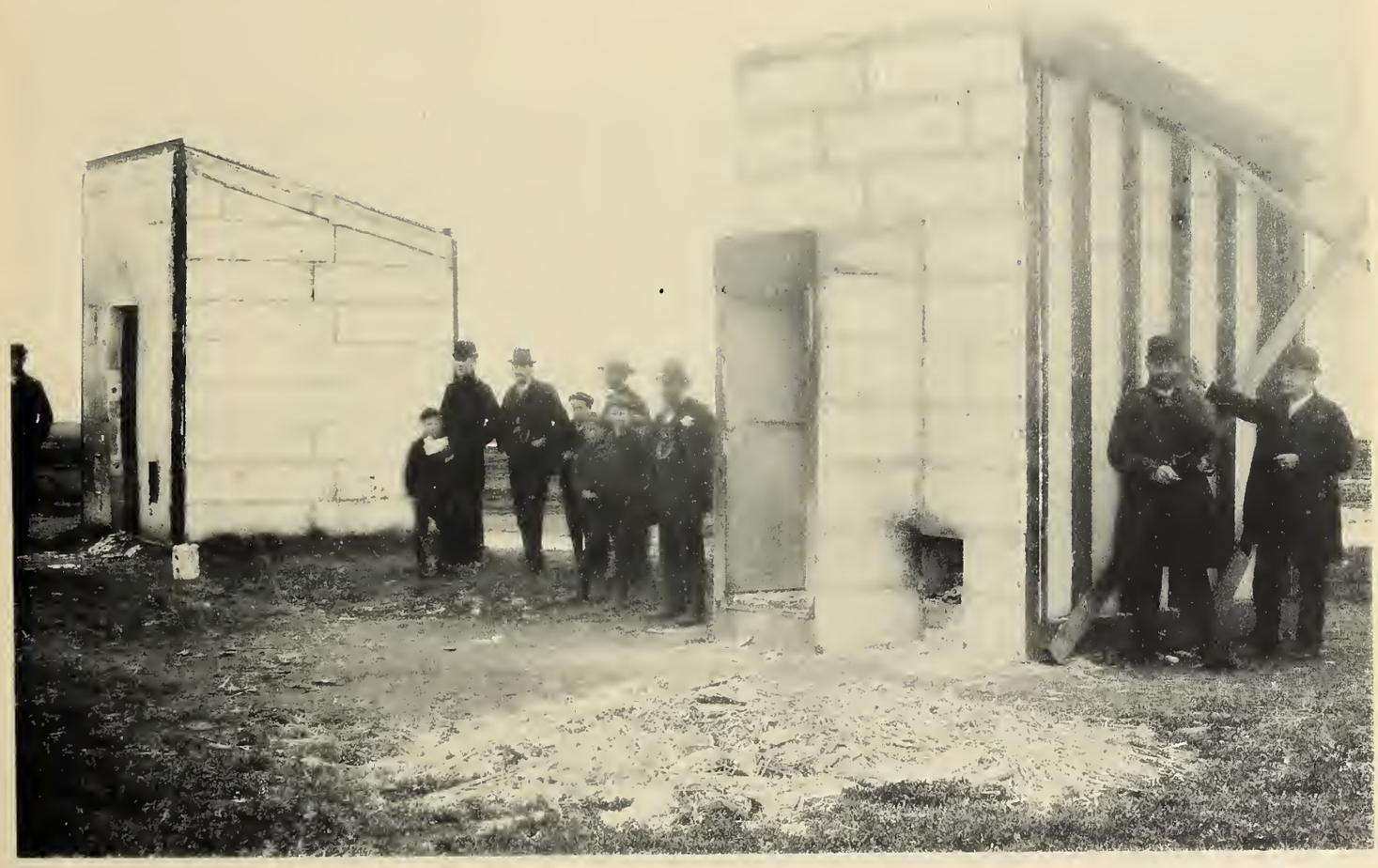
Architect A. N. Baker: For the Vermont Marble Company, a one-story warehouse, brick with stone trimmings, size, 197 by 150 feet; cost $55,000; also, for the Town School Committee, a three-story public school, size 100 by 90 feet; cost $50,000.

Architect F. W. Folk: For B. Crean, a two-story residence, size 22 by 64 feet; cost $5,000.

Architect B. Redington: For A. L. Gohen, a hotel and office building; cost $5,000.

Architects' names not reported: For G. Guffreman, a three-story store and apartment building; cost $7,500. For E. Dunning, a two-story dwelling; cost $5,000. For A. DeWolf, a two-story brick dwelling; cost $11,000.

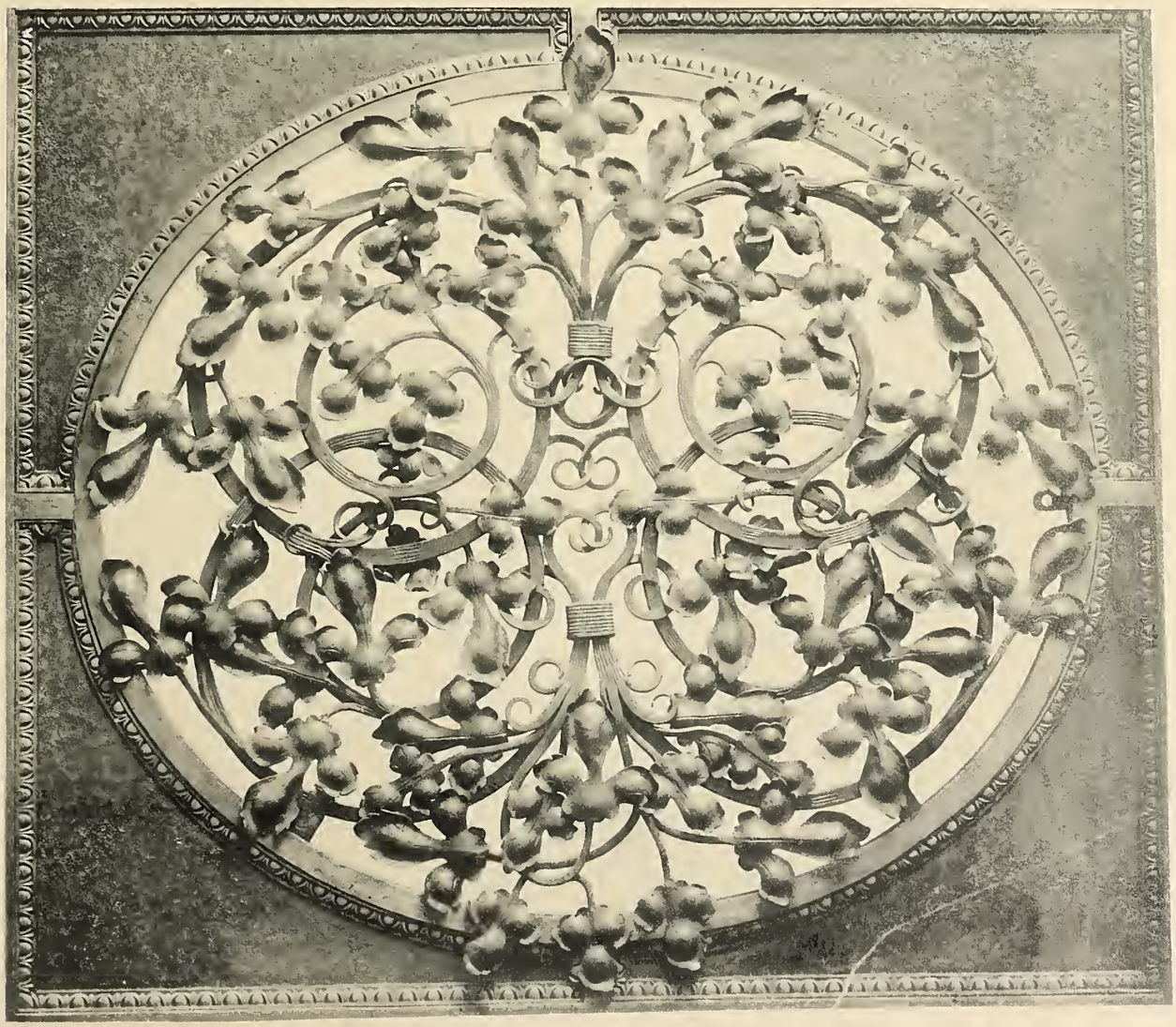
Before Fire.



Industrial Series. Inland Architect Press.

One Hour and Fifty Minutes After Firing — Fire Still at White Heat Inside.

DEMONSTRATION, BEFORE CHICAGO BOARD OF UNDERWRITERS, OF FIREPROOF VALUE OF MACKOLITE PLASTER BOARDS AND HOLLOW TILE, JUNE 4, 1891.



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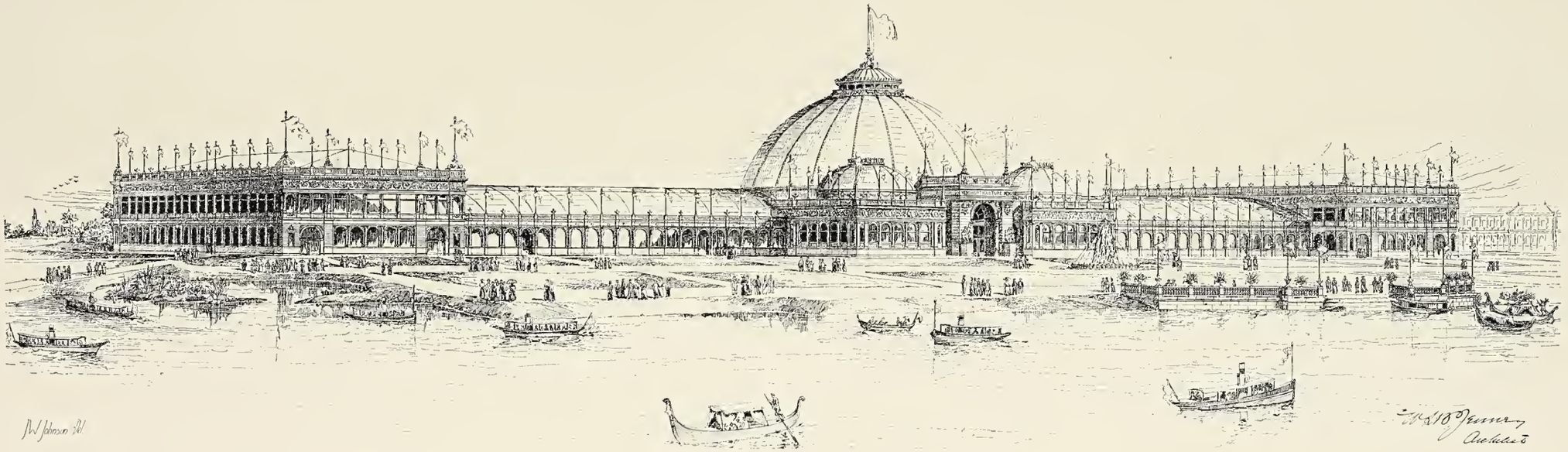
PERSPECTIVE VIEW OF TRANSPORTATION BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

ADLER & SULLIVAN, ARCHITECTS, CHICAGO.



PERSPECTIVE VIEW OF HORTICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

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MILLS BUILDING ~ SAN FRANCISCO CAL ~

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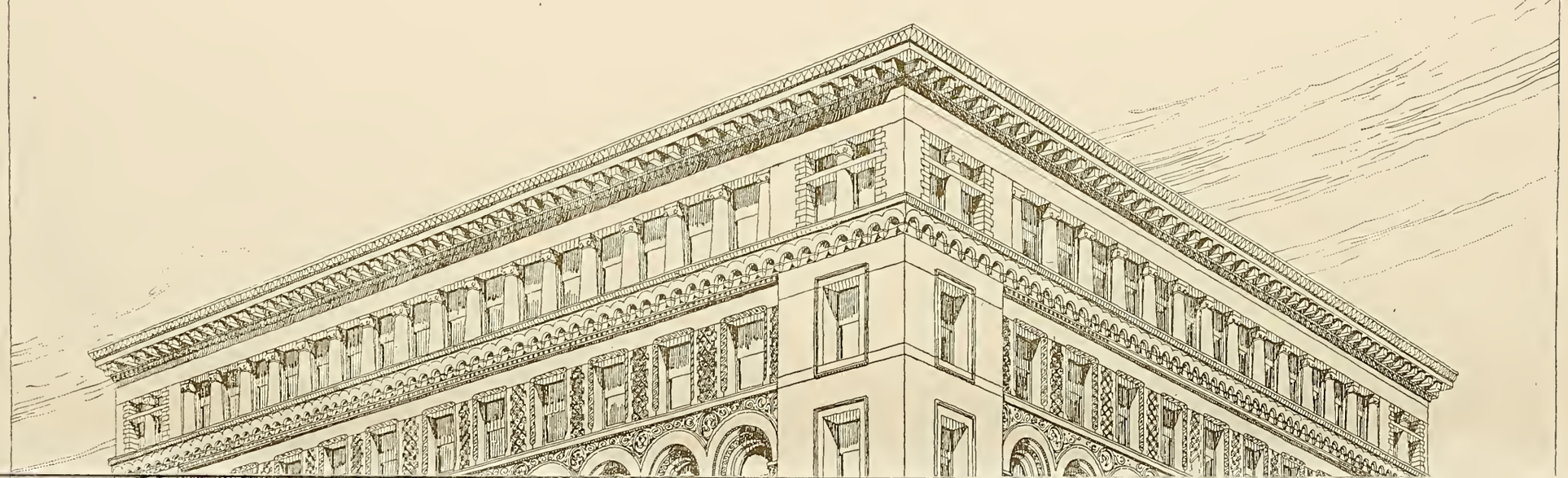

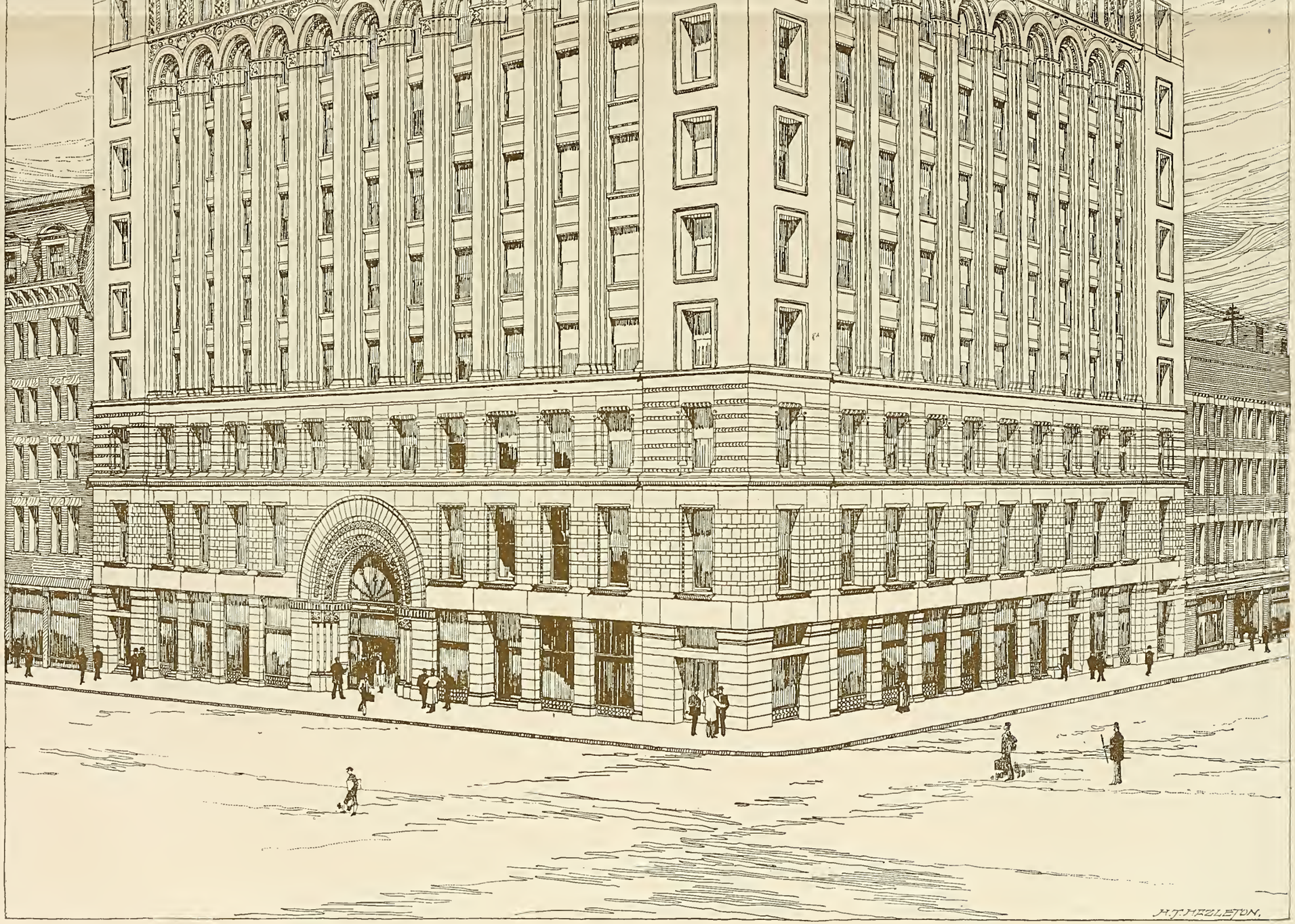

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Mills Building ~ San Francisco Cal. ~

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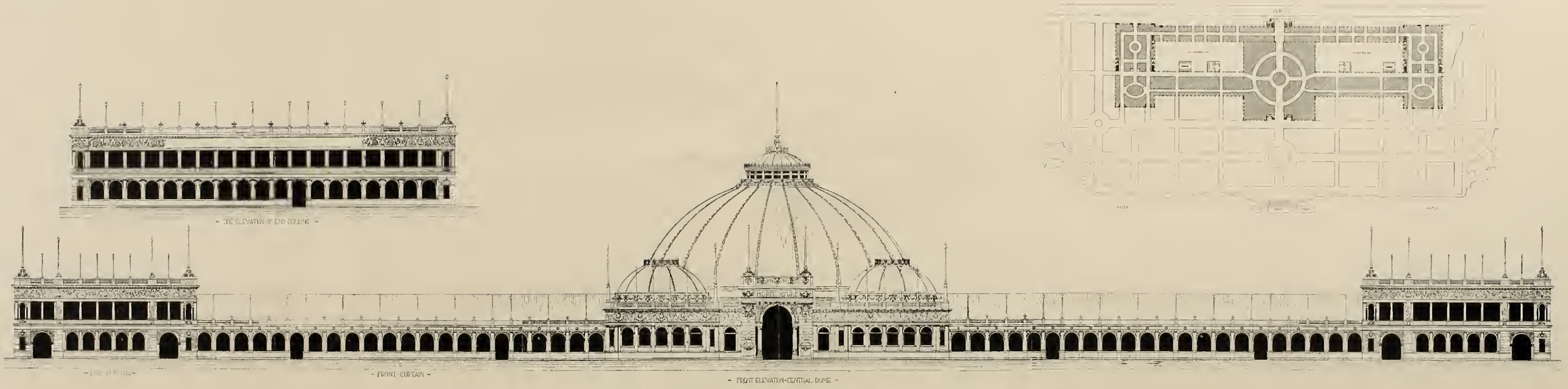

END ELEVATION, MAIN FACADE AND GROUND PLAN OF HORTICULTURAL BUILDING, WORLD'S COLUMBIAN EXPOSITION, CHICAGO. DEPARTMENT OF CONSTRUCTION, MAY, 1891.

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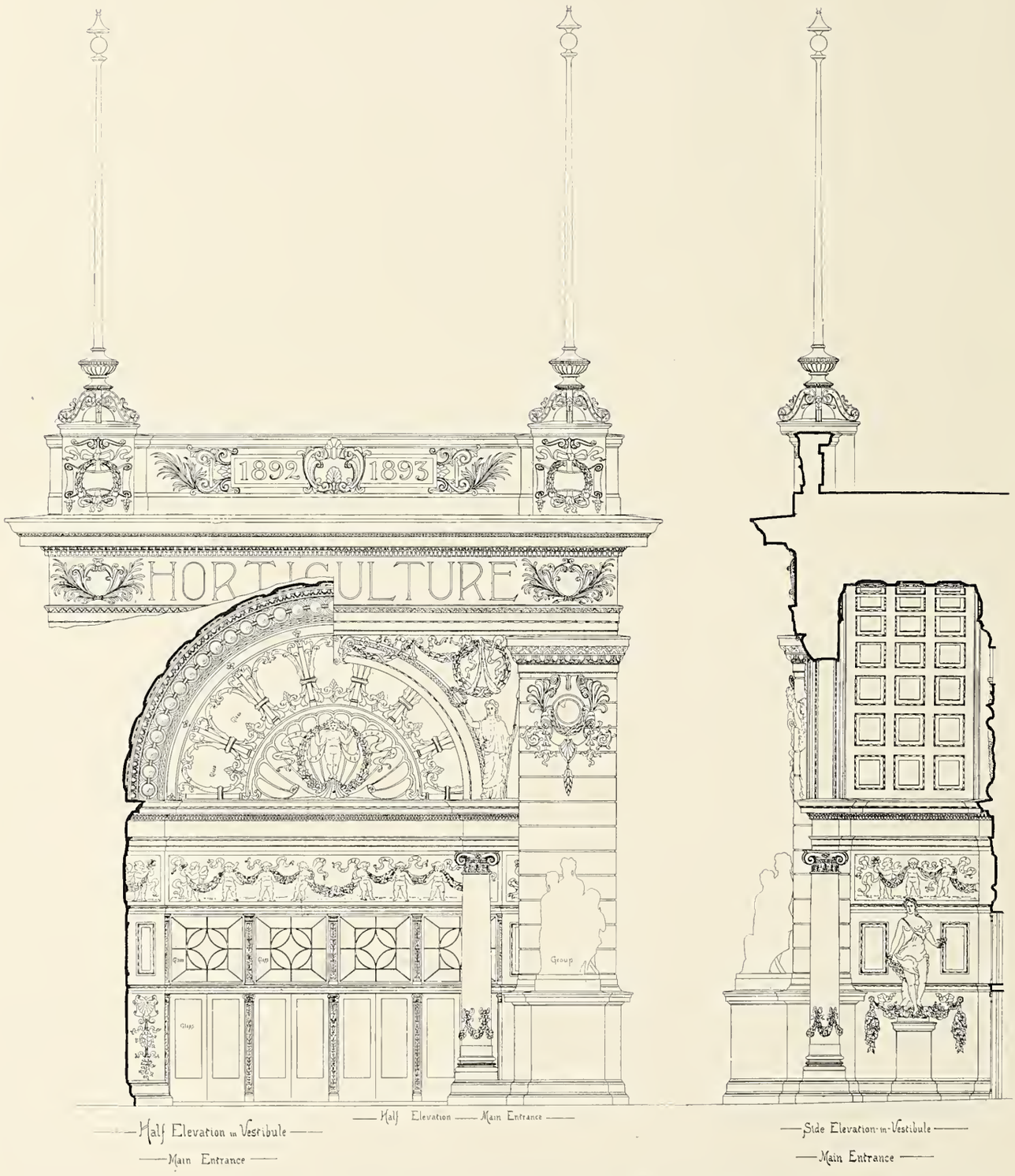

DETAIL OF ENTRANCE TO HORTICULTURAL BUILDING.

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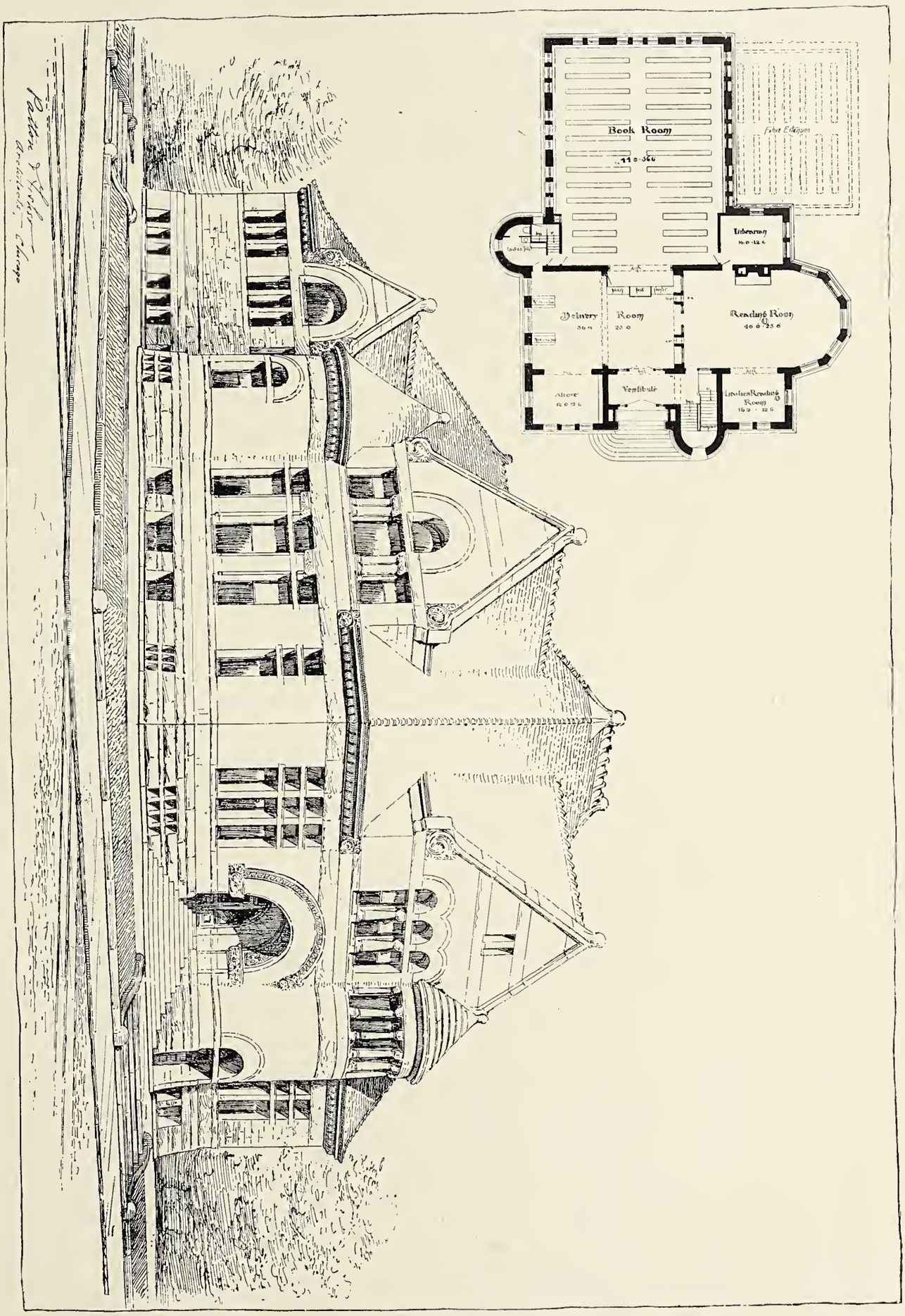

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Death of Edwin Lee Brown.

Edwin Lee Brown, of Chicago, died on July 21, at the age of sixty-four. Aside from such names as Wendell Phillips, George Peabody and one or two other great names that head the list of those who forgot self in working for their kind, the name of Edwin Lee Brown will stand as one who loved his fellow-man. He was born at Milo, Maine, March 4, 1827, and in 1845 he graduated from Bowdoin College in the regular course and in architecture, and, going to Boston, he commenced the practice of his adopted profession. After thirteen years of practice in Boston and New York, during which he acquired a more than local reputation, Mr. Brown removed to Chicago in 1858, and having become interested while in New York in the Hyatt lights, he abandoned his profession, and with his brother Frank, who died in 1870, founded what has become the largest vault light concern in the world, and of which Mr. Brown was president at the time of his death. The offices of the company and his home at Evanston were built from his designs, and at the latter place he was known as an architect before the great fire, though we cannot remember other works than those mentioned that remain to show his architectural skill in later years. Mr. Brown, although never holding any public office, has been intimately connected with many quasi-public organizations. He has been president of the Citizens' Association, the Illinois Humane Society, International Humane Association, one of the managers of the Chicago Library Association, and a director of the Interstate Industrial Exposition. It was as a member of the Illinois Humane Society that he became so well known. When the society was organized, in 1869, he became its first president, and until the time of his last illness was active in that work, as well as other humane enterprises. He took special pride in the work of securing the World's Columbian Exposition to Chicago, claiming to have first spoken in public upon the subject, the following resolution, offered by him and passed unanimously by the directory of the Interstate Industrial Exposition Company, on November 14, 1885, bearing out the assertion:

Resolved, That it is the sense of this meeting that a great world's fair be held in Chicago in the year 1892—the 400th anniversary of the landing of Columbus in America.

As president of the International Humane Society his work in the amelioration of human suffering was not confined to this country, but abroad, and won and held the esteem and confidence, as well as the gratitude, of the people of two continents. Many of the plans and work of humanitarian organizations were outlined by him, and while attending to the many details of his large business interests, and even amid the suffering of his late illness, his mind was active in its interest in the alleviation of suffering whenever brought to his attention.

Competition for Carnegie Library Additions.

The board of trustees of the Carnegie Library at Pittsburgh have issued a circular calling for an additional building or buildings to the Carnegie Library to cost $700,000, the gift of Andrew Carnegie. We do not like the conditions in every particular, and one point is apt to defeat the object of the competition, which, we assume, is to expend the money in the most judicious manner. That is the

absence of a guarantee of expert adjudication. Otherwise the compensation to the successful competitor is satisfactory, and that for the next six best designs is sufficient to tempt architects to compete. It is probable that all competitors will be treated fairly and the letter and spirit of the agreement will be carried out, but it is strange that those who have charge of the expenditure of so large an amount of money, and who have only credit to gain by success, should be so short-sighted as to depend upon their own judgment rather than that of professional advisers, when in a law case involving a like amount their action would be so different. The circular is given in full on another page for the benefit of those who may wish to compete, but it is not encouraging to contemplate the amount of money that will be expended in drawings by architects who will receive no compensation for their labor in any event and the chance of ultimate failure to secure a creditable building which lies at the bottom of all competitions, where expert adjudication of the highest order is not employed and whose recommendations are not rigidly carried out. It is strange that the architectural profession should be found insisting upon expert adjudication of their work in the selection from competitive drawings, when it would seem to be the owner who is more largely interested and who should be most anxious to adopt this and every other safeguard against the adoption of deceptive or pernicious designs.

Useless Government Repairing at Chicago.

According to the instructions of the supervising architect of the United States, another sum of money is to be wasted for repairs upon the postoffice at Chicago. This relic of architectural incompetency has, ever since the walls were built above the first story, cost the government thousands of dollars yearly for repairs. First, the stone used was found defective, and had to be replaced or patched; then, as soon as the foundations received their full weight, unequal settlements occurred, and the walls spread. Several hundred thousand dollars have been appropriated and expended during the past ten years in vain endeavor to stop the settlement and repair the damage which resulted. The foundations have been reinforced, the walls have been tied with rods, and the cracks that appeared through 34-inch brick walls and extended downward several stories have been filled and plastered over, but the building has become dangerous. The interior ironwork, columns, girders, etc., are apt to break and fall upon the employés, and still congress directs that repairs shall be made as usual. The settlement of the walls, of course, breaks the sewer and water-pipe connections, and last Christmas, when the basement was full of holiday mail matter, a 6-inch water main broke and flooded the entire basement. This is the actual condition of the government building in the second city of the United States. The public believe that the walls will fall outward some day, and many fear to pass the building. Of course this is hardly probable, but no one knows the exact condition of the broken mass of concrete that underlies the foundations, or how successfully they will still stand the strain of the immense weight of stone resting upon them. The supervising architect should at least warn congress of the true condition of the building, and recommend that it be demolished, and relieve himself of the responsibility that rests upon him, and the censure, though thoroughly unmerited, that would fall upon him should a fatal accident occur. The postmaster-general has already reported to congress the inadequacy of the building for postal uses. The building should be demolished, and a modern office structure replace it, built out to the street line, and planned to accommodate the different departments of government service. The present supervising architect can do this creditably if he is given the opportunity, or, if the duties of his office would not allow him to give it his personal attention, a special commission could be given to a local architect of recognized ability in office-building designing upon the supervising architect's recommendation. As it stands, people visiting the World's Fair will see in Chicago the greatest private buildings and the worst public monstrosities in the world.

Conditions for the Third Clark Medal Competition.

The third Clark medal competition, the conditions of which have been arranged by the committee in charge, gives to draftsmen an opportunity for showing their knowledge of Greek outline in delineating the Acropolis. The conditions and the problem are as follows:

The competitors are supposed, in pursuance of their studies, to have visited Athens, either in person or in the study of books, cuts and photographs. It is assumed that they have made a special study of the Acropolis, or of the remains or of the restoration of one of the structures found thereon, or of the detail of any part of the same.

The committee will receive in competition for the Clark medals, drawings or sketches, geometrical or perspective, of the Acropolis as a whole, of any part of its structures, or of any detail or details of either of these in their present condition or of restorations according to standard authorities. The selection of a subject within the limits indicated, and the method of rendering to be left entirely to each competitor, the only condition being that there shall be two sheets of drawings, each measuring 18 by 28 inches, mounted on stretchers and marked with a device, and that the work of each competitor shall be accompanied by a sealed envelope, marked on the outside with his device and enclosing his name and address.

There will be a gold, a silver and a bronze medal.

The award will be based upon the degree of actual and critical knowledge displayed in the choice of the subject selected for illustration and in the mastery of the same shown in the drawings, as well as upon skill, taste and judgment in rendering.

It is the hope of the committee that there will be a lively interest in this problem, and that it may become the first of a series of kindred subjects which will become characteristic of the competitions for the Clark medal.

Drawings will be received until noon of October 1, at the office of Dankmar Adler, Auditorium Tower, Chicago.

The committee in charge: Architect Dankmar Adler, chairman, Architects Henry Ives Cobb and Samuel A. Treat, of Chicago, Professor N. Clifford Ricker, of Champaign (Illinois) University, and Lorado Taft, the sculptor, of Chicago, have, in selecting the subject, shown that, in their opinion, the student should first learn his alphabet and demand of him evidence thereof. It is in a way an acknowledgment of a mistake in the selection of the subject of the first competition, an apartment house. But five drawings were received and these exceedingly crude in plan and certainly not remarkable in design. Last year a pedestal for a statue, classical in design, was given as a subject, and twenty-five drawings were the result, and now the committee has declared in favor of drawings from Greek subjects, the present being the first of a series. This should meet with general approbation, as the design of Mr. Robert Clark, the generous donor of the competition fund to the Chicago Architectural Sketch Club, was that it might aid in the education of draftsmen. A large number of drawings should result from the pleasing nature of the subject and the ample time given for their completion, and while the same ratio of increase from five competitors the first year to twenty-five the second year can hardly be expected, there should be at least fifty draftsmen in the United States who are willing to study the Acropolis. If draftsmen will refer to the report of the committee upon the last competition (The Inland Architect, November, 1890, Intermediate News Number), they will avoid many errors.

Architecture and the Allied Arts.

BY BARR FERREE, LECTURER IN THE SCHOOL OF ARCHITECTURE, UNIVERSITY OF PENNSYLVANIA.

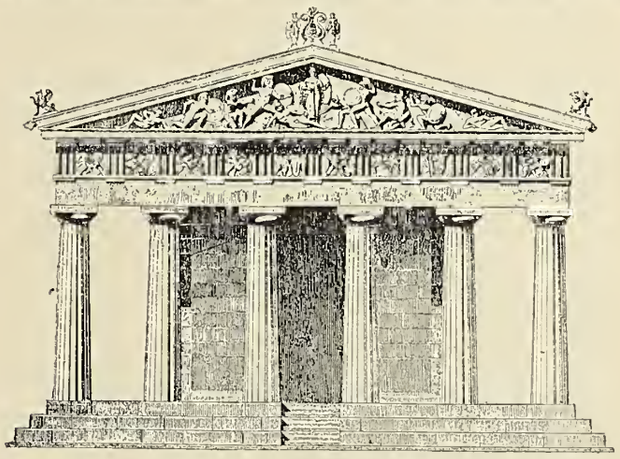
PART II.

GREEK AND ROMAN.

GREEK art being an outgrowth of that of Egypt and Assyria, it necessarily followed that painting and sculpture were as essential to the architecture as in the earlier forms. The remains of ancient Greek art unearthed by Dr. Schliemann exhibit a considerable use of colored decoration. It is of an extremely archaic form, it is true, but the traces he found show it to have been largely used. Sculptured remains are not so numerous, though statues have survived from the earliest times, and it is probable that a lack of technical knowledge and the profound reverence and fear with which the earliest attempts at statuary were regarded limited its development.

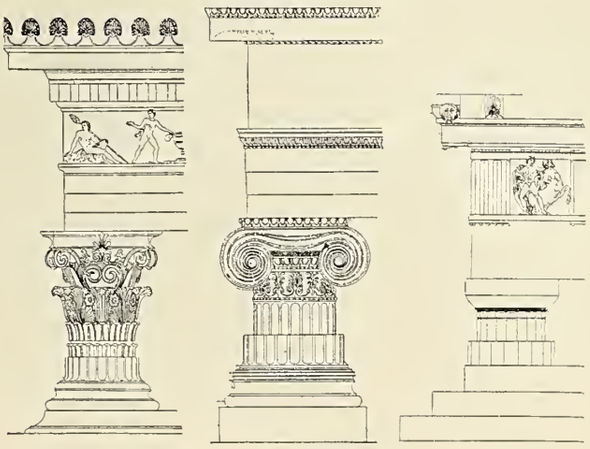
It is only recently that the general use of color in connection with architecture by the Greeks has been recognized by modern scholars. It was long supposed that they obtained their finest effects in the purity of their workmanship, the delicacy of their lines, the refinement of their sculptures, and that color held a subordinate position in their system of decoration, though it is now freely admitted that the Greeks not only used it very largely as an aid to their ornament, but that not unlikely the entire surface of their buildings, walls, columns, entablature, both without and within, were covered with an elaborate system of decoration, not less brilliant and complete than that of the Egyptian itself, though very different in subject matter and technique.

The Greeks applied the allied arts to architecture in a more finished manner than other builders of antiquity. Their architecture was more refined, more scholarly, more delicate than that of other epochs, and it is natural that they should have exercised the same rare gifts in adjusting the balance of sculpture and painting to the



TEMPLE OF ATHENA, EGINA. (Restored.)

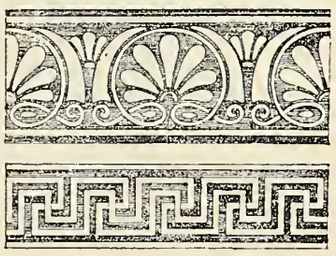
whole edifice. Their system differed in many respects from that of the Egyptians or the Assyrians. Unlike them, they reserved sculpture exclusively for the upper part of the structure, employing it only in the pediments, the metopes of the portico and the frieze of the cella. It was, therefore, far above the eye of the spectator and called for more knowledge of perspective and foreshortening than the older builders had possessed. They made freer use of statues as distinguished from bas-reliefs and the decoration of the pediment was frequently in full relief. Sculpture is now fully developed, and, having passed through the preliminary stages in the Egyptian and Assyrian, reaches results that have never been surpassed. It is not necessary in this place to attempt a panegyric upon the glories of Greek sculpture, but it should be pointed out that many of the finest results of this wonderful art were an integral part of the architecture. The historians of sculpture are accustomed to dwell on the merits of the groups in the pediments of the Parthenon from the standpoint of their particular art. Fortunately these monuments are sufficiently impressive not to suffer from any change of location, but it was never intended that they should be viewed apart from the position for which they were designed and in which they were put. One of their chief merits is the admirable way in which they completely and perfectly filled the position they occupied. There is no distortion of attitude, no evident attempt to fill a given space, but the whole group is exquisitely proportioned to the work they have to do so as to make them an organic part of the edifice. It is this feature which renders the Greek system so intelligent and satisfactory. The Egyptians and the Assyrians covered their walls with a species of embroidery. Wherever the eye rested figures were to be seen. It was very rich, but little more artistic in idea than the modern custom of covering walls with a decorative paper. The Greeks alone, of the builders of antiquity, understood the true function of sculpture and relegated it to its proper place. They realized that when placed



CORINTHIAN ORDER. Monument of Lysicrates. IONIC ORDER. Erechtheion. DORIC ORDER. Parthenon.

on a level with the eye its imperfections were apparent to all. By elevating it to a considerable height they rendered defects invisible, and gave their gods an exalted position which was in keeping with their sacred office. So consistently was this idea carried out that it may be generally said that only divine persons were represented in the pediments. The metopes were reserved for the heroes and the lesser personages of Greek mythology, while the frieze was given up to the human beings, though both gods and heroes were at times included in it.

The completed Parthenon was an edifice of surpassing grandeur and beauty. The delicately tinted walls and columns, the richly ornamented capitals and entablature, every part of which was picked out in beautiful and exquisite designs, the sculptured frieze and the metopes, the wonderful groups of the pediments, possibly colored in the semblance of life, presented a structure of unparalleled richness, which was not only a rich setting to the great chryselphantine statue of the goddess Athena, but a worthy monument to the genius of Greek art. The Parthenon was the culmination of Greek architecture, and therefore illustrates in the best possible way the methods in which the allied arts were employed by the most thoroughly artistic people that ever lived. The chief lesson it teaches, apart from the perfection of the workmanship, the inspired sentiment, the refined execution, is the subordination of the various parts to the whole. Sculpture was reserved for certain portions where it filled a natural position; painting also had its peculiar function, and both aided the sublimity of the architecture by their superior beauty and delicacy of design. The painted decoration followed the lines of the building, and added much to the main elements. The traces of polychromatic ornamentation found at the present day on Greek buildings are so slight as to require the most careful examination to discover them. It is not possible therefore, to speak with accuracy of the later developments of the use of color.



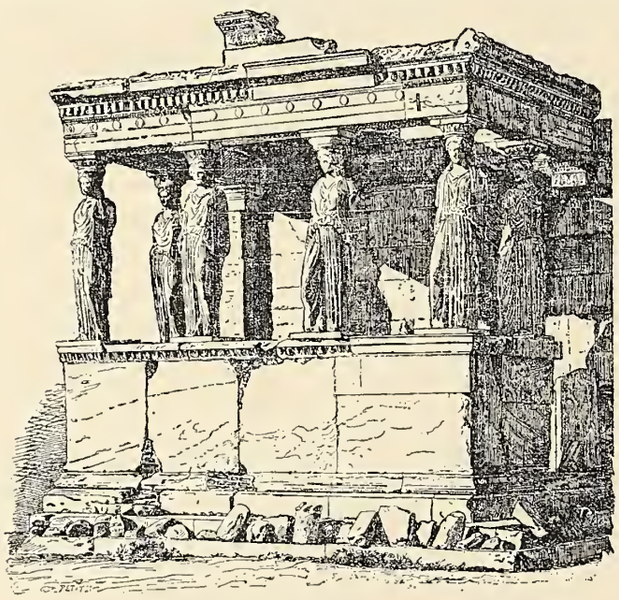
GREEK PAINTED ORNAMENT.

The Doric was the most developed and the order most used by the Greeks. It did not differ materially from the system already described. Sometimes variations occur, as at Phigaleia, where a frieze was carried around above the columns. The temple of Zeus at Agragas (Girgenti) had in the upper part of the interior a series of atlantes which supported the roof. While the use of sculpture in the Doric was in accordance with well understood rules, greater freedom and variety was permissible in the other Greek styles. In the Ionic and Corinthian carved ornament held a much more important place than it did in the Doric, and it is probable that, at the same time, the use of color diminished as an adjunct. In these styles the carved

ornament was frequently of great richness, and there was no necessity for painted decoration.

It is a significant fact that the purest Greek is the form which chiefly depended on painted decoration for its embellishment. The Doric not only made free and constant use of it, but employed forms of such exquisite delicacy and refinement that even in their present bare and naked state they are among the highest expressions of art. In this respect it is in marked contrast to the Egyptian and the Assyrian, in which the ornamentation was so intimately connected with the architecture as to render the latter quite unappreciable without the former. An Egyptian temple without its sculptured and painted accessories, has a dull and gloomy aspect, and is almost devoid of art merit. A Doric temple, on the contrary, though without its accessories, exhibits a purity and grace of form that is so complete in itself that for many years the use of a painted decoration was indignantly denied by the whole school of archæologists.

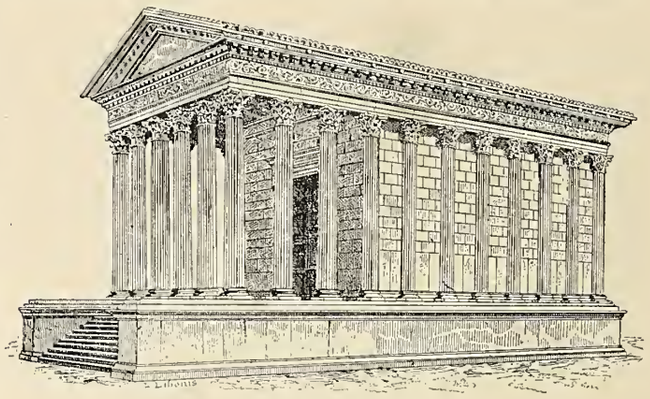
Though the Doric placed architectural sculpture in the upper parts of the buildings, the other styles permitted greater freedom. The caryatides of the porch of the Erechtheion are among the most remarkable illustrations of the application of sculpture to architecture in the whole history of art. The idea of carrying a heavy weight on the head of a human being is repulsive to the general conception of Greek art, but the builder of this exquisite little portico so thoroughly mastered the problem as to deprive it of much of its



PORCH OF THE ERECHTHEION.

unnaturalness and give it a grace of its own. The figures seem to move in solemn procession, and as the limb on which each supports its weight is varied, there is no rigidity. "The elegant forms of these statues are imprinted with a character so marked by solidity and ampleness," says Viollet-le-Duc, "that columns themselves would appear less capable of supporting." In Asia Minor there was more irregularity in the use of sculpture than in Greece. The Ionic columns of the temple of Diana at Ephesus had a lower drum of sculpture, and some apparently two. The great altar at Pergamos, one of the most remarkable monuments of antiquity, was decorated in the lower part with a gigantic sculptured frieze, 144 meters long and 2.30 meters high, depicting the battle of the gods and the giants. Above this was a row of light Ionic columns, the walls behind which were lined with a frieze in low relief. In the Mausoleum at Halicarnassus sculpture was employed on a large scale. Pliny informs us that it consisted of thirty-six columns, a pyramid of twenty-four marble steps, a chariot with four horses, and sculptures on four sides. Unfortunately, not enough remains to produce more than a conjectural restoration. The so-called Nereid monument at Xanthus had two sculptured friezes around its base, and, indeed, there is abundance of evidence that the Greeks used sculpture in their monuments in all places where they thought it desirable. Figures of giants were used to support the stages of the theaters.

It should be remarked that the Greek monuments in which sculpture is most largely used are to be found, not in Greece itself, but in Asia Minor, and to a less extent in Sicily. It is not unlikely, therefore, that the greater use that is made of it may be due not so much to an advance in taste among the Greeks themselves as to the influence of local ideas. In Asia Minor especially, situated between the two great civilizations of Egypt and Mesopotamia, the traditions of an architecture in which sculpture was extensively employed is always more or less to be noted, and in the Greek structures the inhabitants



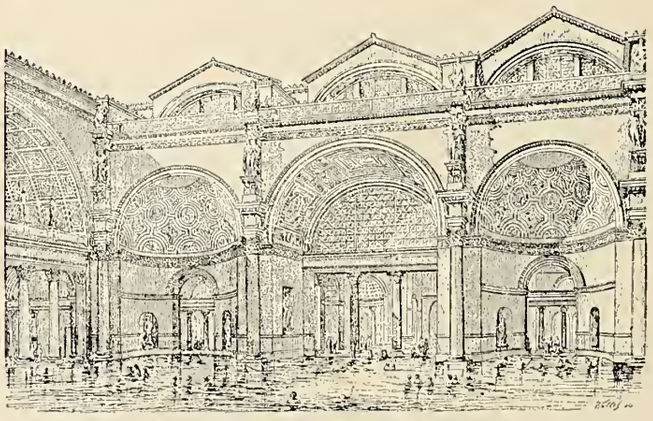
MAISON CARRÉE, NIMES.

have been simply carrying out a method to which they were thoroughly accustomed.

This is not the place to revert to the statuary of the Greeks. They carried this art to a perfection never excelled, and their temples and public places were ornamented with a vast number of statues, of gods and of men, of heroes and of the victors in the games. This form of art was distinct from architectural sculpture, and does not, therefore, call for comment. It should be added, also, that the Greeks produced wonderful works in wall painting, but as our knowledge of these is chiefly based on the testimony of the ancient writers, they cannot be considered here.

Color was freely used by the Etruscans. Their art, however, was at a comparatively early stage absorbed into the more finished Greek by the Romans. The Romans invented eclecticism in art. Their architecture had no early stages exclusively Roman, but had origin in the Etruscan on the one hand and the Greek on the other. These very diverse elements they undertook to amalgamate, and succeeded so far as to devise a style of their own, but which was wanting in the life and purity of the Greek. Roman architecture appeals chiefly to artistic tastes by its magnificence and the splendor of its accessories. The pure lines, the delicate proportions, the exquisite combination of the allied arts, such as is seen in the Greek, were here lost in a medley of riches and a diversity of accessories which bewilder the eye and confuse the senses.

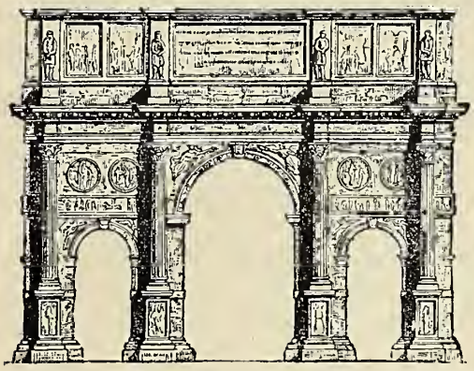
With the swift progress the Romans made in the acquisition of wealth, with the rich spoils the generals brought from all known parts of the earth, it was but natural that they should express these things in their architecture. Their temples and palaces were crowded with the fruits of foreign conquest, with sculpture and paintings, with bronzes and works in precious stones, with hangings of the costliest



BATHS OF CARACCALLA.
Restored.

materials and stuffs of the rarest hues. In time they used the accessories more independently and less intimately connected with the architecture. They did not maintain the balance between architecture and painting and sculpture, as the Greeks. Sculpture was no longer an essential part of the architecture of the temples. Pediments were frequently left bare, and the taste which had previously been directed toward producing a proper combination of all the arts was now

devoted to the production of individual pieces of work which were valued for themselves only, and not as architectural adjuncts. The Romans early lost the profound primitive reverence for the gods which confined their images to the sacred inclosures, and adorned their dwellings and places of amusement and public resort with statues of divinities. Great wealth and a fondness for luxury further aided the multiplication of statues. To such an extent was this done, so numerous were the replicas and reproductions, that it makes a broad distinction between the Greek and the Roman, the former being an architecture ornamented with groups and sculptures of a monumental character, and the latter accompanied with single statues or groups which frequently had no connection with the edifice. In the one system the final effect, the relative proportion of every part, had been carefully determined from the beginning; in the other there was no special occasion for forethought, and though every building was more or less intended to be ornamented with sculpture, these decorations were not a part of the architecture. The pedestal, which could be placed anywhere for any piece of statuary, was a constant temptation for disconnected displays which the Romans could not resist.



ARCH OF CONSTANTINE.

The Roman cities were crowded with statues and works of sculpture of all kinds. Niches, intercolumnations, baths, palaces, bridges, theaters, gateways for arches, steps, balustrades, the tops of buildings, everywhere that a statue could be put it was placed. Whatever Roman sculpture may have lacked in refinement of execution it more than made up in quantity. Scaurus, in B. C. 58, used 3,000 bronze statues in his temporary wooden theater in Rome. In B. C. 33, Agrippa decorated his waterworks with 300 marble and bronze statues and there was still room for more. The passion for collecting speedily developed into a mania, and the number of individual pieces of sculpture owned by one man frequently passed comprehension. In this promiscuous display, where statues were valued more for their number and their cost than for their actual merit, there could be no organic union between the architecture and the sculpture, and no attempt was made to unite them.

It is to be expected that a people who neglected Greek precedent in the application of sculpture to architecture, would be equally derelict in the use of painted ornamentation. For Romans, in fact, revolutionized the system of polychromy the Greeks had brought to such perfection. The color and variety of surface the Greeks obtained by the use of painted decorations, the Romans reached by the use of parti-colored stones and costly materials. Such a system would never have been successful save with a people of limitless resources, great wealth, extensive intercourse with all parts of the earth, and a general disregard for expenditure. Yet even the Romans quailed before the enormous expense of constructing a building throughout of rare and costly marble, and invented the art of veneered architecture. While the system prevented the building from expressing the truth of its material, it permitted the construction of magnificent structures at reasonable cost.

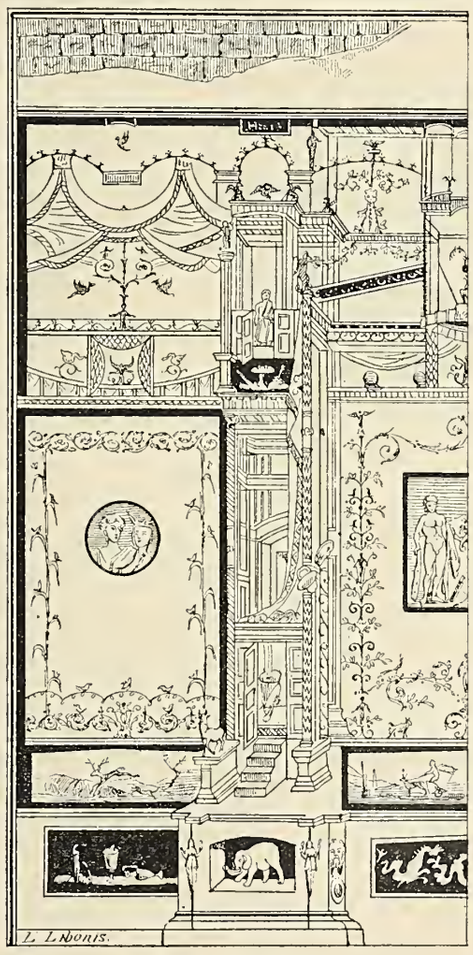
So infatuated were the Romans with this style of building, that if became one of the characteristic features of their art. Walls of rubble-work or brick, faced with thin slabs of marble or stone, form the usual Roman method. Nor was the veneering always limited to surface ornamentation, but a decoration of columns, arches and entablature was applied to the walls, with which they had no structural connection. They were ornament with architectural form.

It can readily be conceived that an architecture in which the colored decorations were used on such a system must offer many points of difference with those styles which depended on the use of paint. It marks, in fact, a new era in art, and indicates an advance in the architectural spirit which even the Greeks, with their refined tastes and delicate sensibilities, did not reach. The two systems of polychromy cannot be justly compared. Their methods and results were too different, they worked on too divergent lines, to permit any fair or equitable comparison. Each sought to give variety to the building and add to its beauty, but beyond this they have nothing in common. The Egyptian column, for example, obtains its rich effect from the colored scenes and pictures that are depicted on it; the Roman column derives its beauty from the intensity of the natural color of the marble and the brilliancy of the polish. The decoration of the one could not have been used on the other. Each was an essential part of its own style, and a column of the Egyptian method would have appeared as much out of place in a Roman edifice as one on the Roman system in an Egyptian building.

The use of colored stone as decorative features probably suggested the use of mosaic. The place of the invention of this art has not been determined, though it is probably of eastern origin. The Romans used it largely for pavements, and have left some very considerable works of this kind, and they also used it to a limited extent as a wall decoration, but they never employed it in the free and brilliant manner which was afterwards done by the Byzantine artists.

Pliny describes a mosaic at Pergamos, representing the remains of food and sweepings left on the floor, and containing, among other things, a dove drinking from a dish, and darkening the water with the shadow of its head, while other doves sun and plume themselves on the edge of the vessel. A great mosaic found in the Casa del Fauno, in Pompeii, represents the victory of Alexander over Darius in the battle of Issus. It is one of the most splendid specimens of the art that has come down from antiquity.

Notwithstanding that the Romans carried the decoration in colored stones and marbles to such a high degree of perfection, they made liberal use of paintings and painted ornamentation. The remains at Pompeii, as well as many references in the writings of Roman authors and discoveries in Rome and other cities, testify to the liberal use of this form of decoration. The discoveries at Pompeii show that it was usual to completely cover the internal walls of a Roman mansion with paintings. The character of this decoration, of scenes and figures placed within an architectural framework of great delicacy and lightness, all brilliantly colored, is too well known to call for description. It is important as showing that while the Romans affected a new art they did not neglect the possibilities of the old.

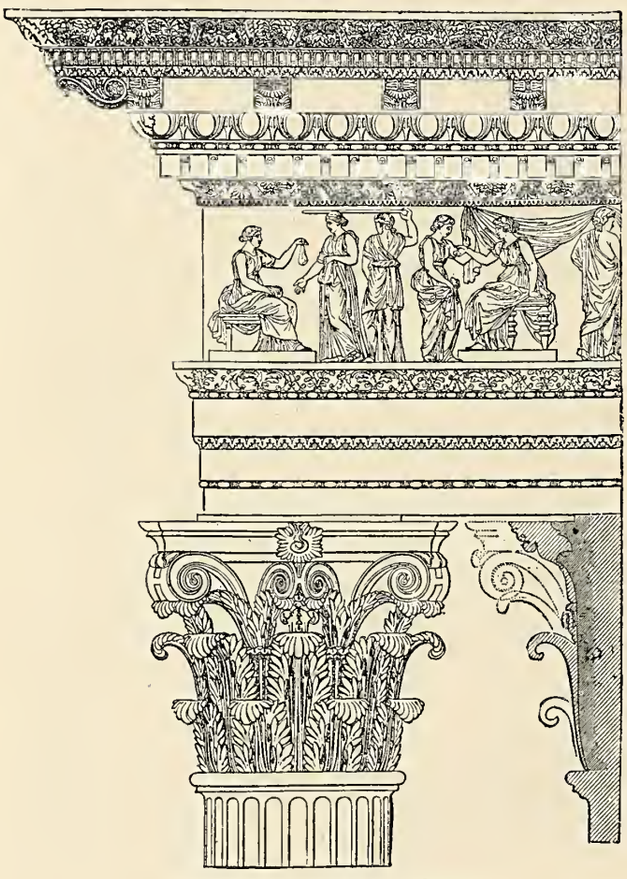


POMPEIIAN WALL PAINTING.

Sometimes the entire wall surface of a room was covered with paintings which had no regard for architectural lines and were intended to produce the effect of a park of considerable dimensions. Sometimes there are mural paintings proper, not large enough to occupy an entire wall. Several were frequently placed in line and separated from each other by pilasters; these were intended to represent scenes of country or sea viewed through a window. Others were either panel pictures actually let into the wall or were painted to resemble them. The architectural paintings found at Pompeii, of light and graceful forms, with small accessory pictures or without, and which are probably the best known of all forms of ancient

painted decoration, constitute another great group. There is no doubt but that the Romans made very large use of wall paintings, but the greater part of them have long since disappeared.

It is evident, from this hasty glance at Roman architecture, that a building in the most elaborate style of Roman art must have been a structure of unparalleled gorgeousness and magnificence. The richly colored columns, the capitals of bronze, the innumerable statues, the vessels of copper, of silver and of gold, the spoils of foreign conquest, the gathered riches of the world, presented a combination quite unlike anything seen before in the history of art. Without the crudeness and partially barbaric character of the Egyptian or the Assyrian, without the superlative refinement and finish of the Greek, it in a measure combined the merits of all. Roman art was too eclectic, it depended too much on the elements of other styles to be termed



CORINTHIAN CAPITAL AND ENTABLATURE.
Forum of Nerva, Rome.

original, yet the Roman genius for absorption and assimilation was as well illustrated in architecture as in politics. Notwithstanding its diverse origin they made their art as peculiarly their own as the Greek was Greek or the Egyptian Egyptian. They were not satisfied with limiting the decoration of a building to a frieze of statuary or a group in the pediment and a liberal application of painted designs. Their walls were apparently, if not really, of the most brilliantly colored marbles, the columns were of the rarest and richest stone, statues were placed on every available part of the façade, on the skyline and on pedestals in the arcades and elsewhere. The capitals and entablatures were as richly decorated as any portion of the structure. The pure lines of the Greek Doric were broken by a sculptured ornament and the Corinthian both in its own form and the hybrid composite exhibited a luxury of ornament that quite deprived it of its primitive structural significance. Bronze was used in the form of capitals for the columns and for statues, and the greatest artists were employed to add to the result by the skill of their pencils. The magnificence of the whole was overwhelming, and many Roman structures suffered from an overloading of decoration. But it was thoroughly in keeping with the natural instincts of the people and is a trustworthy testimony of the great national love for display and luxury.

(*To be continued.*)

The architectural firm of Bullard & Bullard, of Springfield, Illinois, and Tacoma, Washington, is dissolved by mutual consent, and a partnership has been effected between George W. Bullard and Albert Haywood, with offices in the Pacific National Bank Building at Tacoma.

Notes from our French Exchanges.*

THE ARCHITECTURAL GRAND PRIX.

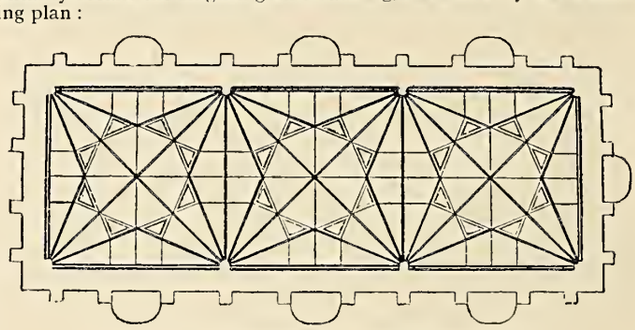
THE programme for the *grand prix* in the section of architecture this year is a most startling departure from the ordinary requirements laid down by the Institute for this competition.

As M. Cisar Daly remarks, someone seems to have had an attack of common sense, and instead of an impossible palace for the arts, the students are to expend their energies upon "a central railroad station with an immense hotel for travelers, together with all the necessary business offices for the officials of the road," in fact a combined station, hotel and office building.

Other indications there are that architectural instruction in France is taking a new departure, and that the genius of the country is to be turned to making artistic and harmonious those things which modern invention has now made necessities. A few months since, one of the principal annual prizes at the Ecole des Beaux Arts was, to the honor of the conservative element, competed for with a subject no less commonplace than a car for a passenger elevator. The successful student not only obtained the prize but also sold his design to an elevator manufacturer, while several of the authors of unsuccessful drawings were likewise negotiating for the sale of their designs. Even in the subject of architectural composition there seems to be a tendency to break away from the stereotyped forms, and a recent number of *La Semaine des Constructeurs* devotes considerable space to what it calls a new method of composition, from which article the following extracts are taken :

"M. de Baudot, in his lectures on French architecture, which he gave at the Trocadero this year, elaborated the method of composition in the past and particularly that of the middle ages, with reference to possible solutions of modern buildings with modern requirements."

After developing his theory by numerous preliminaries he enters into the consideration of the main question. This he commences by the examination of the means it could be desirable to employ in roofing over a large space, supposing that iron were to be used. As a case in point, let us consider the machinery building at the last exposition, which as an executed piece of work is of great importance and permits the most useful kind of criticism — in fact, is a great step in advance; but the problem has not even here received its most perfect development, especially from an architectural point of view. It is not sufficient to build a building of great size, but it is necessary that its visible construction should accentuate and more clearly bring out the fact of its size. With this aim in view it is desirable to avoid the repetition of trusses or beams parallel to the length of the building. But knowing that by spanning any space by transversal beams the impression of size is accentuated, the idea of so placing beams or trusses follows naturally. However, to fill up the large spaces other beams are necessary, and consequently secondary ribs have to be provided; this leads to an arrangement of roof framework that involuntarily recalls the English gothic vaulting, as shown by the following plan :



PLAN OF ROOF FRAMEWORK FOR A GREAT PUBLIC HALL.

Wishing to cover larger spaces one is obliged to increase the number of ribs, and they should always be placed so as to radiate from the points of support, placing them equi-distant from each other (which is the same principle as that of the English gothic vault). M. Baudot explains at considerable length, that he was not brought to this result by the idea of copying the vault form, but that by various modes of reasoning and investigation he was brought independently to that point.

The contraction and expansion of the metal is ingeniously arranged for, and it appears to be possible to place the roof covering directly upon the rib work, which would certainly be a most economical arrangement, and might eventually be applied to every kind of iron construction as well as to large buildings of the character under consideration. Calculations have shown that the weight of iron entering into a given roof after this system of construction is almost identical with that employed in the same space in machinery hall at the exposition, while by making the curves of the roof trusses parabolic there would be an economy. The most desirable and artistic shape, however, must be a subject for more definite and accurate study.

MOTIFS FROM ANTIQUE ARCHITECTURE IN MUSEUM DECORATION.

The idea of introducing in the decoration of certain rooms of our museums motifs from the antique architecture of the period to which the objects exhibited belong, has made considerable progress, but we now have to note another step in advance. M. Proust, a former minister of fine arts, has just explained his ideas in an interesting lecture. He frankly places himself at the head of the movement, and

*Translated and arranged by W. A. Otis, architect.

in this lecture certainly demonstrated the desirability of our museums reviving in the different rooms the decoration of each period of our history in direct connection with the objects of that epoch there exhibited. To place all sorts of different and dissimilar fragments in exactly similar rooms, with custodians always in the same uniforms, and settees, etc., all exactly of the same kind, is an arrangement that has endured long enough. The Guimet Museum had in this direction served as a school: the Greek rooms are given a Hellenic appearance; the Buddhist rooms, an Indian look, etc. Why, then, according to this principle, should not the objects of art of the thirteenth and fourteenth centuries be displayed in a room with pointed arch openings and a vaulted ceiling? Why not furnish with Louis XIV chairs, and rococo canopy the parlors where the jewel cases and bonboniers of that reign are shown to the public?

A trial of such a scheme is at least going to be made at the coming exposition by the Philanthropic Society. It is hoped to there show in its fullness the period of the Empire under Napoleon I, with its furniture, its clocks, its fireplaces, its ceilings and its classical woodwork, and we can only congratulate the administration for this innovation. After this trial it is to be hoped that our architects will not stop by only rendering homage to this imperial style of Bonaparte, but that they will find occasion to glorify our French art in some of those other periods, where it shone with so much brilliancy before its decadence.

OCEAN CANALS TO PARIS.

The project of making Paris accessible to ocean vessels by means of canals and the River Seine is again being agitated, and a commission recently appointed by the government has obtained responses favoring the scheme from all the departments on the route except the one at the mouth of the river where Havre is located. Naturally Paris as a seaport would very materially injure the prosperity of Havre, and as a result the opposition at that point was unanimous. Of one hundred and ten boards of trade in different parts of France and Algeria, seventy were favorable to the idea and forty opposed it. The promotors of the work hope soon to bring the project before the Chamber of Deputies, when the debate promises to be warm and interesting.

Mosaic Floors.

INFORMATION of importance to architects and owners of public and private buildings has been compiled by the manager of the Henry Dibblee Company, of Chicago, from observations made during long experience, augmented by a recent trip through Europe, where the conditions spoken of were closely inspected. They are as follows:

Such an evident craze having recently developed in portions of this country, and particularly in Chicago, for marble mosaic floors, and believing that no poorer floor for actual wear and practical service could be had, I have recently devoted many days' time to investigating the extent to which marble mosaics are used in Europe, as compared with English ceramic mosaics. I have endeavored to make such an investigation a fair one, and therefore conferred with some of the principal marble dealers in England and Scotland, who stated that when it came to mosaic floors they were obliged to furnish ceramic instead of marble, and that it was a very uncommon thing for them at the present time to put in marble mosaic.

The reasons given are:

1. No marble will wear as long as ceramic, and certain marbles are much softer than others, thus making the floor very uneven in time.

2. In order to level a marble mosaic floor it is rubbed or actually worn down to a level, so that when completed some pieces are very thin and some are thick, a uniformity in thickness being absolutely impossible.

3. The material in which it is laid contains a large amount of lias lime, which in a short time is affected by the atmosphere, causing cracks and seams to appear, and thus not only disfiguring the floor, but giving one the impression that the building must have settled, thereby reflecting on the architect of such building.

When informed by me of the extent to which marble mosaics were being used here, the dealers in Europe whom I visited expressed great surprise, and affirmed that a few years would do away with marble mosaics for actual and constant service here as it had there.

Examine the marble mosaic floors in the following buildings in this city (Chicago) and see how they are filled with cracks and seams, which no amount of repairing will ever remedy: Hyde Park Hotel, the Auditorium, the Rookery, Chamber of Commerce, Illinois National Bank Building, Chemical Bank Building, LaFayette Building, Metropolitan National Bank, Monon Block.

While English ceramic mosaics have not as yet been used much in this country, they are no experiment, and I submit the names of a few prominent buildings in foreign countries where these are in use:

Municipal Buildings, Glasgow—Over 100,000 superficial feet of ceramic mosaic, laid about four years; traffic to rates office incessant; in perfect order. Clothing Store, Jamaica street, Glasgow—Ceramic mosaic, laid about six years, still perfect; stone step in front of same worn through. Callander Hotel, Glasgow—Ceramic mosaic, laid eight years, still perfect; during summer months thousands of visitors; heavy luggage all carried over same. Trades House, Glassford street, Glasgow—Ceramic mosaic, laid four years, perfect; heavy traffic daily. Scottish Legal Insurance Building, Glasgow—Ceramic mosaic, perfect condition. Standard Insurance Office, Glasgow—Ceramic mosaic, perfect condition. Liberal Club, Glasgow—Ceramic mosaic, laid ten years, still perfect. McLechlen's Saloons, Glasgow, several in number—Ceramic mosaic, laid seven years, all still perfect. Presbyterian Hall, St. Vincent street, Glasgow—Ceramic mosaic, laid six years, perfect. Children's Hospital, Glasgow—Ceramic mosaic, laid six years, perfect. P. & W. McLellan, machinery warehouse, Glasgow—Ceramic mosaic, laid three years, very heavy traffic, perfect condition. Coates' Cotton Mills, Machinery Hall, Glasgow—Ceramic mosaic, perfect condition. Stockwell Church, Pollockshields, Glasgow—Ceramic mosaic, laid five years, perfect. Ross Hall, Glasgow—Ceramic mosaic throughout, perfect. Houses of Parliament, Melbourne; St. Paul's Cathedral, Melbourne; Centennial Hall, Sydney; Jubilee Hall, Weymouth; Town Hall, Sandback; New Vestry Hall, Mount street, London; The Exchange, Johannesburg; Tasmanian Bank; Joint Stock Bank, Halifax; Canada Life Insurance Offices, Toronto; Coffee Palace, Paramatta; Gas Offices, Wakefield; Business Premises, St. Andrews; Central Station, Carlisle; Royal Hotel, Blackfriars, London; South Western Bank, Wandsworth, London; Landport Bazaar; Royal Stores, Cardiff; Technical School, Dewsbury; Art and Science School, Wakefield; Grand Hotel, Hastings; Westcliffe Hotel, Birchington-on-Sea; Osborne Hotel, Bradford; King's Arms Hotel, London; Royal Hotel, Norwich; Wergs Hall, Wolverhampton; Wyrley Grove, Pelsall; Holmeside, Nutfield; Olympia Hall, West Kensington; Fitzwilliam Museum, Cambridge; Bow Church, Cheapside.

I have recently inspected personally many of these floors, and only wish our architects could see them. The only criticism ever made against ceramic mosaic is the clear solid effect in each color. This is now obviated by a process of mixing in veiny effect, various colors, so that when cut into small pieces the effect in color is soft and pleasing.

The ceramics used in mosaics are mostly vitrified, and are absolutely proof against the hardest traffic or wear. They are leveled when being laid, and cannot be rubbed down or worn as marble mosaics are leveled; thus every piece is of uniform thickness, and they are laid in English portland cement. The first cost is a trifle more than marble mosaic.

We hold ourselves ready to guarantee any English ceramic floor furnished and put in by us for twenty years, and to guarantee it against cracks or seams appearing, as in marble mosaics, and further guarantee to adjust any defects appearing for ten years without charge, except where caused by actual settlement of building, and where such fact can be demonstrated. No marble mosaic dealer will give any such guarantee.

If the statements herein are true (and I stand ready to prove them in any way described), it certainly is worth careful consideration and investigation on the part of architects and owners who are erecting or contemplating the erection of buildings either for public or private use. ANSON S. HOPKINS,

President and general manager, The Henry Dibblee Company, 266 and 268 Wabash avenue, Chicago.

June 25, 1891.

Carnegie Library Competition.

JAMES B. SCOTT, president of the board of trustees of the Carnegie Library, at Pittsburgh, has issued a circular calling for competitive drawings from architects for an additional building, or buildings. The official circular is as follows:

CARNEGIE LIBRARY, PITTSBURGH, PA., July 1, 1891.

INFORMATION FOR ARCHITECTS.

The buildings to be immediately erected in connection with the Carnegie Library of Pittsburgh will be situated at main entrance to Schenley Park, fronting on Forbes street, and will be located as shown on the topographical sketch and photographs herewith furnished.

(The designs for the various district libraries to be erected in different parts of the city in connection with Mr. Carnegie's sheme, at a cost of $300,000, do not enter into the present competition.)

The various details incident to the construction and design, such as materials used in the elevations, style of architecture, etc., will be left to the judgment of the competing architects, as the trustees desire to draw out the fullest expression of plan and design from those competing.

The building, or group of buildings, as the designer may think best, must include space for the following purposes, namely:

1. Library with stack rooms.
2. Music hall.
3. Art gallery.
4. Museum.
5. Rooms for the within named societies.
6. Rooms for classes in connection with the study of art (may be in basement).
7. Administration accommodations, and workrooms for various employés; also, proper location for heating apparatus, etc.

LIBRARY BUILDING.

The library building with stack rooms must be of sufficient size to accommodate 200,000 volumes, the accommodations to be adapted to the purpose of a first-class reference library. It must also have connected with it further provision for a circulating library of say 25,000 volumes. The plan of building must be so arranged that it can be enlarged to contain 500,000 volumes without injury to the artistic effect of the exterior, or detriment to the general plan.

MUSIC HALL.

The music hall must have a minimum seating capacity of 2,000, not including the platform, which must be large enough to accommodate a chorus of 400. The portions of the proscenium arch, usually occupied by first tier of boxes on each side, will be designed for a large divided organ, one-half of which will be on each side of arch (instead of usual first tier of boxes), the organ to be shown on the section through the hall. Part of the seating of the hall can be placed in a gallery, if thought best for the effect of the design or the general plan of the building.

ART GALLERY.

The art gallery must have a clear hanging space of not less than 600 lineal feet. The trustees would recommend that this be divided into several rooms, and the light must be a top light, unaffected by higher buildings near at hand. The art gallery must be capable of future indefinite extension without detriment to the architectural effect of the buildings.

MUSEUM.

The museum should consist of several rooms, but the trustees will not insist upon any special arrangement, the only demand being that a sufficient space be provided for a first-class museum. Part of the accommodation for this purpose might be had in the basement, which the trustees think should be elevated sufficiently to admit of proper light and ventilation.

ACADEMY OF SCIENCE AND ART.

Accommodations embracing following societies: 1. General meeting room with seating capacity of 300, so arranged that some of the following rooms can be thrown into it, increasing the seating capacity to 700 or 800. There should be accommodations for a chemical and physical laboratory in connection with above, and storage for physical apparatus. 2. Cloak room, adjoining meeting room, with an area of about 600 superficial feet.

ART SOCIETY.—Committee room containing about 225 superficial feet.

ENGINEERS' SOCIETY.—1. Library and reading room containing about 1,250 superficial feet, with storage closets. 2. Secretary's room containing about 225 superficial feet, with closet.

MICROSCOPICAL SOCIETY.—1. Meeting room containing about 800 superficial feet. 2. Laboratory containing about 225 superficial feet.

BOTANICAL SOCIETY.—Meeting room containing about 800 superficial feet.

AMATEUR PHOTOGRAPHERS' SOCIETY.—1. Meeting room containing about 800 superficial feet. 2. Darkroom containing about 180 superficial feet.

ARCHITECTS' SOCIETY.—Meeting room containing about 400 superficial feet, with closets, and, if possible, a room for models adjoining.

The areas and capacities of society rooms mentioned above are are not absolute, but suggestive. If deemed advisable, all the libraries of above societies can be placed in one room in connection with main reference library and adjacent to the rooms of the various societies. Water facilities wanted in all cases, and in accordance with the purposes of the societies and the various departments. The entire building must be fireproof throughout.

CONDITIONS.

In respect to the sum to be expended, drawings required, and compensation for the successful architect, the trustees have adopted the following:

1. For the erection of the above buildings the sum of seven hundred thousand dollars ($700,000) is appropriated, which must include premiums, commissions and every item of cost.

2. In case it may be found, after the selection of plans and the procuring of estimates for the above building, that the cost will exceed the sum mentioned, the trustees will then reject the plan so selected, without compensation to its author, and select instead another architect's plans which they may deem better suited to their requirements.

3. The required drawings shall be made and limited to a scale 1-16 inch to 1 foot, and shall consist of four elevations, two or more sections and plans showing each story, and at least a perspective from the northwest corner of the building, and at an angle of thirty and sixty degrees. No required drawings to any other scale than 1-16 inch to 1 foot will be received. The privilege is allowed of making additional plain drawings or perspectives which may be necessary to clearly illustrate any construction in the buildings. All the foregoing drawings shall be made in black lines, no shading being allowed, except line etching on the perspective of the building. The walls of the building on the plans and sections to be blackened. One human figure will be allowed on perspective to give the scale of building. Any embellished drawings or perspectives will be rejected.

4. A typewritten description of the building shall accompany each set of drawings, giving as clearly as possible such information concerning the materials

and methods of construction, decoration, etc., as cannot be shown on the drawings.

5. These drawings and specifications must be delivered at the office of James B. Scott, president of board of trustees, No. 122 Second avenue, Pittsburgh, Pennsylvania, before noon on the first day of November, 1891.

6. The competitor furnishing the designs adopted by the trustees will, if he desires, be employed to furnish the working and detail drawings and specifications and to superintend the erection of the building, for which he will receive five per cent on the cost of the building, except as noted below, said five per cent to cover all expenses connected with the services usually rendered by an architect in a first-class building, including daily supervision of the work as it progresses, and in case of his inability to give constant supervision, the architect will employ a competent representative for such purpose at his own cost.

The five per cent commission shall not include the cost of work or materials outside of the architect's designs, and which he will not be called upon to design or supervise.

7. To the competitors furnishing the six sets of drawings adjudged next in merit to the selected plans, the trustees will pay the sum of two thousand dollars ($2,000) each, it being understood that no one competitor will receive more than one premium.

8. All rejected drawings and those receiving the cash premiums will be returned to their authors within reasonable time after determination of successful competitor.

Correspondence in connection with foregoing can be addressed to James B. Scott, President Board of Trustees, Pittsburgh, Pennsylvania.

World's Columbian Exposition Instructions.

THE following circular has been issued by the Department of Publicity and Promotion. It is particularly addressed to foreign exhibitors, though applicable to all who are not already informed upon the subject. It was after considerable discussion regarding the best method not only to protect intending exhibitors but to simplify and facilitate communication by those in search of information that it was issued, and by following its directions no exhibitor will be misled or misinformed. The circular is therefore given in full.

Numerous irresponsible enterprises have sprung into existence, with a view of making capital out of the World's Columbian Exposition. By assuming names resembling, to a greater or lesser degree, the legal title of the Exposition Company, and at the same time sufficiently distinct to escape the consequences of an infringement of a title protected by the state, many of these companies, whether intentionally or not, have conveyed the impression that they are allied to, or officially recognized by, the World's Columbian Exposition. While it is undesirable to enter into the question of the merits or demerits of any of these organizations, it has nevertheless been deemed advisable that the public, and especially the foreign public, should be informed that the following corporations are the only ones whose officers are empowered, in any manner or form, to treat officially with exhibitors or others having business with or at the exposition:

The World's Columbian Commission, a national organization composed of commissioners from each of the forty-nine states and territories comprised in the United States, and eight Commissioners at Large. All representatives of the exposition to foreign countries have commissions issued by George R. Davis, the director-general, under the seal of the commission, attested by its secretary, John T. Dickinson.

The World's Columbian Exposition, a corporation organized under the laws of the State of Illinois. All contracts entered into for the construction of buildings, for concessions, privileges or other matters pertaining to revenue will be made and recognized only upon the signature of the officers of this body, to wit: President, William T. Baker; vice-president, Thomas B. Bryan; secretary and solicitor-general, Benjamin Butterworth; treasurer, A. F. Seeberger.

The Board of Lady Managers of the World's Columbian Commission is authorized by act of congress, and has for its mission the preparation of the ladies' department of the exposition for such exhibits as may be presented by women, and also to aid in the conduct of such of the world's congresses, to be held in Chicago during the exposition, as will consider questions immediately affecting the well-being of women. Its officers are: President, Mrs. Bertha Honore Palmer, of Chicago; secretary, Mrs. Susan Gale Cooke, of Tennessee. All communications with reference to the branches of the work within the jurisdiction of said board should be addressed to the president or secretary of the Board of Lady Managers of the World's Columbian Commission.

The World's Congress Auxiliary, organized for the purpose of arranging for world's congresses to be held in Chicago during the period of the exposition. Official communications on such matters should be addressed to President C. C. Bonney or Secretary Benjamin Butterworth.

The executive work of the exposition, under the direction of Director-General George R. Davis, has been divided into the following departments:

A. Agriculture, Food and Food Products, Farming Machinery and Appliances; W. I. Buchanan, chief.

B. Viticulture, Horticulture and Floriculture.*

C. Live Stock, Domestic and Wild Animals.*

D. Fish, Fisheries, Fish Products and Apparatus of Fishing; J. W. Collins, chief.

E. Mines, Mining and Metallurgy; J. W. Skiff, chief.

F. Machinery.*

G. Transportation—Railways, Vessels, Vehicles; Willard A. Smith, chief.

H. Manufactures; J. W. Allison, chief.

J. Electricity and Electrical Appliances; John P. Barrett, chief.

K. Fine Arts—Pictorial, Plastic and Decorative; Halsey C. Ives, chief.

L. Liberal Arts—Education, Engineering, Public Works, Architecture, Music and the Drama.*

M. Ethnology, Archæology, Progress of Labor and Invention—Isolated and Collective Exhibits; F. W. Putnam, chief.

N. Forestry and Forest Products.*

O. Publicity and Promotion; Moses P. Handy, chief.

P. Foreign Affairs; Walker Fearn, chief.

*Chief not yet appointed.

Other executive officers: Installation, secretary, Joseph Hirst; Traffic, manager, E. E. Jaycox; Ceremonies, secretary, E. C. Culp.

Communications relative to any of the above-named branches should be addressed to Director-General George R. Davis, or to the respective chiefs of departments. All information will be furnished gratuitously. It is, however, recommended in those countries or states where a properly organized government commission has been appointed, that all inquiries be addressed to the officials of such commission, the latter being in constant and direct communication with the officials of the World's Columbian Exposition.

St. Louis Union Depot Competition.

THE competition for the Union depot at St. Louis has been decided in favor of the plans of Architect Theo. Carl Link, of St. Louis. Eight sets of plans were submitted though ten architects were invited to compete, Messrs. S. S. Beman, of Chicago, Shepley, Rutan & Coolidge, of Boston, and Peabody & Stearns & Furber, of St. Louis, declining because of the terms offered. The first prize was awarded to T. C. Link, of St. Louis; the second prize to Grable & Weber, of St. Louis; the third prize to Van Brunt & Howe, of Kansas City. Two and one-half per cent was offered by the railway people as full commission. The other competitors were H. Wolters, of Louisville; Bruce Price, of New York; George R. Mann, of St. Louis, and James Stewart & Co., of St. Louis.

Our Illustrations.

The Michigan Trust Co. Building, Grand Rapids, Michigan; S. S. Beman, architect, Chicago.

Library and office building for Board of Public Schools, St. Louis, Missouri; Isaac S. Taylor, architect.

Perspective of Electricity Building, World's Columbian Exposition, Department of Construction, June, 1891; Van Brunt & Howe, architects, Kansas City.

Perspective and plans of Union Depot, St. Louis, Missouri; Theo. Carl Link, architect. The depot will be situated on the south side of Market street, between Eighteenth and Twentieth streets. The depot is planned to accommodate thirty trains standing side by side, the shed being about 600 by 1,000 feet. The ground floor contains a court with an area of 10,000 square feet. The frontage on Market street is 456 feet. The general hall on the main floor has a clear story of about fifty feet from floor to ceiling. The walls of main rooms will be wainscoted with enameled brick or tiling, and above this of Roman brick. Ceiling beams exposed, marble or mosaic floors. The specifications call for heating and ventilating apparatus, dynamos for electric lighting, and exhaust fans to force air from the top of the tower down. The tower will be two hundred feet high, will contain clock and four dials, and be lit with electric lights. The commission was awarded, with a prize of $10,000, to Mr. Link, in competition with eight other architects.

PHOTOGRAVURE PLATES.

(Issued only to subscribers for the Photogravure edition.)

Residence at No. 148 Astor street, Chicago; Irving K. Pond and Allen B. Pond, architects.

Residence of E. E. Gray, Belmont avenue, near Lake Shore Drive, Chicago; George W. Maher, architect. Five full-page plates are given showing the following views: Exterior, hall, reception room, dining room, lounging room.

Special colored plate accompanying Photogravure edition — The Casino, of World's Columbian Exposition; Burling & Whitehouse, architects, Chicago; from water color by Arthur Heun. The Casino will stand out in the lake 1,000 feet from the shore and is intended to reproduce Venice on a small scale in Lake Michigan. The Casino will be built on piles and connected with the shore by a pier 80 feet wide. The base dimensions of the Casino will be 180 by 400 feet. The building will consist of nine pavilions, two stories in height, and, with the exception of the central one, 80 feet above the surface of the water. The center pavilion will be 180 feet high. There will be communication between the nine pavilions both by gondolas and bridges. Completely surrounded by water this structure, with its fleet of boats and numerous water-ways, is expected to have a decided Venetian flavor. Surrounding the central pavilion will run a gallery 56 feet wide. The pier connecting the Casino with the shore will form a broad promenade. At the west end of the pier will stand the thirteen columns designed by Sculptor St. Gaudens, to represent the thirteen original states. In front of the Casino will be a harbor for small pleasure craft. At night the harbor will be lighted by incandescent lamps sunk beneath the surface of the water on floats. The material of the Casino will be of wood and the walls will be covered with staff. A striking combination of high colorings will be effected.

New Publications.

HEATING FOR HEALTH, by Frederic Tudor, S. A. Copyrighted and published by the Westminster Publishing Company, New York.

This is a small pocket companion, neatly printed, telling all about how to heat a house for health, by a writer who is not merely a theorist, but is a practical sanitary architect and knows what he is talking about. It is a book that every tenant and house owner should have a copy of. We don't know its price, but it can't be much, as it is gotten up to circulate.

ARCHITECTURE OF THE RENAISSANCE IN ENGLAND, by J. Alfred Gotch. London: B. T. Batsford; Boston: Ticknor & Co.; Chicago: A. C. McClurg & Co. To be published in six parts, each containing twenty-one plates, of which seventeen or eighteen will be reproduced from photographs specially taken for this work, and the others from drawings by the authors; with letterpress illustrated by numerous sketches; plates 14 by 10 inches. Price, to subscribers, $8 per part net, in portfolio.

Of necessity, space limitations impose limitations of choice in the making up of such a work, and the authors in their selection of subjects have confined themselves to English work, not including buildings in Scotland, Ireland and Wales. The subjects, again, have been chosen almost wholly from domestic work, with but few cathedrals; and these, again, in nearly every instance from work erected between the years 1560 and 1630. The earlier work, embracing the first crude adaptations of renaissance to English types, had then given place to a free, vigorous handling, in which English characteristics were preserved and treated with spirit. The later renaissance work was more strictly imitative of continental models, and in the same proportion was less distinctively English. It was a period when the average educated man was expected to be versed in pretty nearly all the learning of the day, and we find that the English gentleman was frequently his own architect, sometimes with the result of building stairways that led nowhere (curious how stairways bother an amateur architect), or with rows of windows intersecting tiers of joists; sometimes with the result of a happy individuality. Probably the few able architects did a good deal at long range by way of consultation, and the owner and the builder combined the ideas at the work. Like other ages, it had its fads, and John Thorpe, who is the central figure among the architects of the period, followed the prevailing fad in symbolism by planning his own house to the form of his own initials. The authors have been forced to reproduce some well-known buildings in order that the selection might be truly representative of the

time; hence, in the first part we find such mansions as Burghley House, Hardwick Hall and Haddon Hall. But much of the work is comparatively fresh to the American student. Of these less known buildings there are in this first part Hambleton Old Hall, simple but with great attractiveness; Ragdale Old Hall, with its curious mixture of materials and styles; Apthorpe Hall, with its purity of treatment; St. John's, Warwick, as good in its way as Haddon Hall, and the picturesque Hall i' th' Wood, with its old timber and newer stone in an oddly jumbled harmony. Altogether the first part is very well edited, the phototype plates excellently reproduced from skillfully taken negatives, and the whole portfolio tastefully gotten up. The letterpress errs, if at all, on the side of brevity; a brief introduction, giving a somewhat scanty account of peculiar social conditions in the Elizabethan era that governed the modes of domestic architecture, is followed by detailed accounts of the buildings represented in the respective plates.

Synopsis of Building News.

Baltimore, Md.—Architect Charles E. Cassell: For Joseph M. Cone, a seven-story office building, size, 65 by 83 feet, stone and all improvements; to be erected on the site of the old Law Building.

Buffalo, N. Y.—Architects C. K. Porter & Son have prepared plans for the Builders' Exchange, to be erected on Pearl and Court streets. It will be a brick and stone building, seven stories high, and cost about $100,000.

Architect W. H. Archer: For the Young Men's Christian Association, North Tonawanda, New York, Association building, 132 by 93 feet, brick and stone, tin roof, galvanized iron and stone trimmings, four stories high, comprising suites of Association rooms, baths 50 by 40 feet, gymnasium, 50 by 50 by 28 feet, public hall, 40 by 60 by 20 feet, bowling alley, and four stores, iron girders and columns, mantels, sanitary plumbing, steam heating, gas and electric light, plate glass, concreting, etc.; cost $45,000. Theater building, Tonawanda, New York, 90 by 46 feet, brick and stone, tin roof, galvanized iron trimmings, four stories high, iron roof construction, columns and girders, balcony fronts, stage fittings, scenery, and seats 700; also three stores, inside finish, heating and ventilation; cost $20,000. First Presbyterian Church, Tonawanda, New York, 50 by 75 feet, brick and stone, roof trusses, circular seating, stained glass, iron ceiling, galvanized iron trimming, inside finish, steam heating, etc.; cost $15,000. E. Howard, Linwood avenue, Buffalo, New York, frame barn with modern improvements. For F. G. Gould, Dunkirk, New York, three-story frame and brick residence, shingle roof, hardwood finish, steam and hot water heating, mantels, bath room, toilet and lavatory apparatus, and inside blinds and all modern improvements, concrete basement, etc. For Fred F. Jewell, Dunkirk, New York, two-and-a-half-story residence, shingle roof, staircase and reception room, oak finish and inlaid floors, inside blinds, bath room, toilet and lavatory apparatus, mantels, hot air heating, concrete basement. For Skinner & Co., Buffalo, New York, factory building, brick and stone, 60 by 130 feet, three stories, monitor roof, tin covering, mill construction, asphalt flooring, galvanized iron cornice and trimming, plate and common glass, machinery and appliances; cost about $10,000. Business block for Charles Williams, Tonawanda, New York, 100 by 45 feet; brick and stone, tin roof, skylights, iron girders and columns, plate glass, bowling alley, four stores and suites of apartments, with baths, washbowls, washtubs and modern improvements.

Chicago, Ill.—Architects Sprague & Newell: For W. F. Kroll, a three-story and basement residence and a three-story and basement dwelling, size 62 by 70 feet, to cost $30,000. They will have fronts of pressed brick and stone, with slate roof, hardwood interior finish, steam heat, electric light and all improvements. For the Illinois Hotel Company, they are making drawings for a hotel to be erected in Chicago. It will be constructed of pressed brick and stone, have hardwood interior with marble wainscoting, tile floors, four elevators, steam heat, electric light and the best of modern improvements; the cost will be $250,000. It will contain 780 guest rooms, besides parlors, dining rooms, offices, etc. The same architects are preparing plans for a business block to be erected at Pueblo, Colorado. It will be five stories in height, 120 by 140 feet in size, have steam heat, electric light and all improvements and cost $125,000. For O. H. P. Baxter, they are working on plans for a handsome three-story and basement residence, 118 by 112 feet in size, to be erected at Pueblo. It will be constructed of rock-faced granite, have tile roof, hardwood finish throughout, marble floors, bronze stairways, electric light, hot water heating, art and stained glass, porcelain bathtubs, bowling alley, billiard room, and the best of modern improvements; it will cost $150,000. For the same, a stable of granite exterior, tile roof, hardwood finish, etc.; cost $20,000.

Architect Henry Ives Cobb has let the mason work for the Newberry Library, on Walton place, to Angus & Gindele. It will be a five-story building 300 by 69 feet in size, costing upward of $500,000.

Architect Cass Chapman: For Joseph Duplicy, at 409 to 415 Forty-sixth street, a three-story apartment house, 50 by 116 feet, to cost $40,000. The front and cornice will be of Bedford stone, the interior to have hardwood finish, furnaces and all sanitary improvements.

Architect Henry Sierks: For the Western Wheel Works, at 127 to 129 Sigel street, a five-story warehouse and factory; to have pressed brick and stone front, electric light, elevator, etc. For Julius Ahlers, a two-story residence, to be of Bedford stone front.

Architect D. S. Pentecost: For George W. Shoop, at 142 and 144 Colorado avenue, a three-story store and flat building, pressed brick and stone front, etc. For the same owner, at 147 Sacramento avenue, a two-story flat building. For Charles H. Cochran, at Prospect Park, a two-story frame residence, hardwood finish, furnace, etc.

Architect Gottfried Thiel: For Martin Anderson, a three-story flat building, of rock-faced stone front. For Otto Haak, a three-story flat building, on Robey street near Clybourn place; Tiffany pressed brick and Bedford stone. For Theodore Gribi, at Elgin, five two-story flats of pressed brick and stone fronts; cost $20,000.

Architect H. Copeland: For Brown & Lindquist, at 4158 Oakwood avenue, a four-story flat building, to have buff Bedford stone front, steam heat, etc.; cost $25,000.

Architect J. A. Wierzbieniec: For Julius Piotrowsk, on Laurel street and James avenue, a three-story store and flat building, of St. Louis pressed brick and Bedford stone, to cost $16,000. For M. Rybski, on Laurel street, a three-story store and flat building, of pressed brick and stone front; making plans.

Architects J. F. & J. P. Doerr: For John Kohnert, at 609 Thirty-first street, a three-story store and flat building, of Bedford stone front. For C. E. W. Platt, on Berkeley avenue, near Forty-fifth street, a four-story apartment house, of pressed brick and terra cotta front; steam heat and all modern improvements; cost $16,000; making plans. For R. F. Reedy, on Thirty-first and Armour avenue, a three-story store and flat building, 50 by 85 feet; cost $25,000; Bedford stone front. For Joseph Stein, on Forest avenue near Thirty-sixth street, three three-story and basement residences, to have Bedford stone fronts, furnaces, hardwood interior, etc.; cost $24,000.

Architect Theodor Lewandowski: For Albert Schacht, on Webster avenue and Bissel street, a three-story store and flat building, of pressed brick and stone; cost $14,000. For J. E. H. Hemman, on Oakdale avenue near Halsted street, a two-story flat building of blue Bedford stone front.

Architect A. Druiding: For the St. George Catholic Church, to be built at Thirty-ninth street and Wentworth avenue. Church to be built of brick with stone trimming front and pressed brick. Church to be 146 feet deep and 71 feet wide and two towers, one 160 feet high and the other 110 feet high. It will have a slate roof and will be heated with hot water. The church to be built in the early Gothic style, the church to have eight hundred seating capacity. St. George pastor's residence, to be two-story brick with stone basement; the building to be slated and heated with hot water; all modern improvements will be in the building; cost $9,000. Catholic schoolhouse in Naperville, two-story and basement building, 84 feet by 60 feet; all built of Naperville stone. The building will be erected with all modern improvements, with best system of heating and ventilating. Building to contain four large schoolrooms in first story and hall and anteroom in second story. The basement to contain playrooms and the heating and ventilating apparatus. St. Xavier Church in La Grange; frame, with the exception of a stone basement. The basement to contain three schoolrooms, and the church to have a seating capacity of three thousand. The building to be 48 feet by 93 feet 6 inches, and tower to be 94 feet 8 inches high. St. Stanislaus Church near Douglas Park; brick with stone for basement; first story to contain church auditorium with four hundred seating capacity, second to have two large schoolrooms and the pastor's residence 58 feet by 76 feet 6 inches. Pastor's residence of St. Teresa's congregation; 29 feet by 70 feet, consisting of basement and two stories with a stone front. The building to contain all modern improvements, to be ready for occupancy about November 1. SS. Peter and Paul's Church at Ellinwood, Kansas; 46 feet by 86 feet with a tower 120 feet high, built of local brick with a stone framework.

Architect W. J. Van Keuren: For Jesse A. Baldwin, at Oak Park, a two-story frame residence, with stone foundation and first story of pressed brick, hot water heating, hardwood finish, etc. For R. W. Day, at Wynette, a two-story shoe factory, 50 by 100 feet, of common brick.

Architect Clinton J. Warren: For Frank Baker, on Market street between Madison and Washington, an eight-story office building, 50 by 150 feet; cost $200,000; to be of pressed brick and terra cotta front, steel construction, have steam heat, elevators, electric light, all improvements. For James M. Reddy, on Seventy-fifth street and Dobson avenue, a four-story apartment house; to be of pressed brick and stone, and cost $20,000.

Architect John Addison: Porter Memorial Church, at 498 South Paulina street; first story of cut stone, and above of timber and plaster, with metallic shingle roof, Georgia pine finish, steam heat, etc.

Architect J. J. Egan: For John Condrich, on Washington boulevard, a three-story flat building, of Bedford stone front, steam heat, etc. Also completing drawings for St. Patrick's Catholic Church, to be erected at Cedar Rapids, Iowa; all stone, slate roof, hardwood finish, steam heat, gas fixtures, stained glass windows; it is in the Romanesque style of architecture, and shows a handsome edifice.

Architect J. A. Thain: For F. Garland, a three-story flat building, to have Bedford stone front, hardwood interior, hot water heating, etc.; cost $20,000; to be erected on Prairie avenue near Twenty-fourth street. For J. W. Cassell, five three-story and basement residences, to be erected on Sixty-first street and Ellis avenue; they will have Bedford stone fronts, hardwood finish, furnaces, etc., and cost $50,000. For A. F. Fisher, at 4517 Greenwood avenue, a handsome three-story residence of pressed brick and stone front, slate roof, have hardwood finish, hot water heating, and cost $25,000. For H. G. Bird, at 4519 Greenwood avenue, a three-story residence, of frame, with slate roof, stone basement, hot water heating, etc.; cost $18,000.

Architect Wm. Strippelman: For John T. Kelley and H. B. Brown, on Madison street near Francisco, two three-story store and flat buildings; they will have stone fronts and all improvements.

Architect L. B. Dixon: For A. M. Rothschild, corner of Michigan avenue and Thirty-seventh place, three-story residence of St. Lawrence or Georgia marble front, steam heat, etc.; plans are completed and ready for figuring.

Architect C. S. Corwin: For Dr. A. W. Harlan, a two-story residence of pressed brick, stone and frame; to have hardwood interior, steam heat, and cost $15,000; it will be built on Greenwood avenue and Forty-fourth place.

Architects Lamson & Newman: For Wm. Clancy, on Vernon avenue between Grand boulevard and Vincennes avenue, a two-story residence of Bedford stone front, hardwood interior, furnace, and all improvements; cost $11,000.

Architect George Beaumont: For D. L. Streeter, at 152 State street, rebuilding four-story store recently burned; steam heat, electric light, passenger and freight elevators, etc.

Architects Beers, Clay & Dutton: For Doggett Brothers, corner of Wabash avenue and Harmon court, a five-story building, 80 by 171 feet; cost $75,000; pressed brick and terra cotta front, steam heat, elevators, etc. For J. P. Smith, on Lexington avenue and Fifty-second street, a two-story frame residence; stone basement, hardwood finish, steam heat, electric light; cost $17,000. For J. Spencer Dickinson, at Evanston, a two-story frame residence. For J. F. Rhodes, at 1619 Prairie avenue, a three-story residence, of stone front, hardwood finish, etc.; cost $25,000. For W. W. Clay, corner of Woodlawn avenue and Fifty-first street, five three-story residences; hardwood finish, furnaces, electric light, etc.

Architects C. L. Stiles & Co.: For George M. Hord, a four-story flat building, 50 by 80 feet; cost $25,000. It will have a blue and buff Bedford stone front, steam heat, electric light, etc.; to be erected on Fifty-first street near Washington avenue.

Architects W. W. & L. J. Myers: For S. S. Fogg, on Lake avenue opposite Jackson Park, a four-story flat building, 50 by 98 feet; cost $25,000; stone and pressed brick front, copper bays, marble and tile work, steam heat, etc. For D. Sullivan, on Wentworth avenue near Thirty-first street, a three-story store and flat building, 50 by 30 feet; cost $15,000; Bedford stone front, galvanized iron bays, pine finish, etc. For Matthew Brennan, at 4018 Vincennes avenue, a two-story residence, of Bedford stone and Georgia marble front, hardwood finish, hot water heating, and all sanitary improvements.

Architect Wesley A. Arnold: Making plans for two-story foundry, to be built at Joliet; to be of stone construction with slate and gravel roof. For the Bennett estate at Evanston, six double two-story and basement frame houses; stone basements, hardwood finish, furnaces and sanitary plumbing. Also making plans for M. E. Church, to be erected on Twenty-fourth street and Millard avenue, Lawndale. It will be of granite front with round tower, have oak finish, memorial stained glass windows, furnace, bell, organ, etc. There will be accommodation for a congregation of 800 persons.

Architect J. H. Huber: For B. F. Weber, two two-story residences of frame, with granite basement, furnaces, etc.; cost $6,000 each. For Chicago & North-Western railway, at High Ridge: A waiting-room, to be of pressed brick and granite, and have platform 275 feet long.

Architects Wilson & Marble: For Jacob Kramer, four-story store and flat building, corner of Madison street and Hoyne avenue. It will have a front of 136 feet; to be of stone, have hardwood finish, steam heat, electric light, marble and tile work; cost $60,000.

Architect Alfred Smith: For T. J. Sammons, on southeast corner of Washington boulevard and Sheldon street, a three-story flat building of Tiffany pressed brick and stone. For St. Stephen's Church, on Johnson street, near Taylor, a three-story addition. Also working on drawings for Emanuel Episcopal Church, to be erected at Rockford, Illinois; to be of stone construction with slate roof, have interior of pressed brick, steam heat, stained glass windows, bell, organ, etc.; size 100 by 110 feet; to accommodate a congregation of 600. There will also be a three-story chapel with a seating capacity of 250.

Architect Fred Ahlschlager: For T. E. Lyons, at 6138 South Halsted street, a three-story store and flat building; cost $16,000; St. Louis pressed brick and Bedford stone, all improvements, electric light. For B. McCaffrey, corner of Dearborn and Forty-fourth streets. For John Mies, on Cedar street, near Wentworth avenue.

Architect J. M. Van Osdell & Co.: For John Spry, on Lake street, near Jefferson, an eight-story factory 100 by 150 feet; cost $75,000; pressed brick and terra cotta front, electric light, elevators, etc.

Architect Thomas Wing: For George Hankins, a five-story apartment house, 100 by 161 feet in size; cost $100,000; to be erected on Michigan avenue and Forty-second streets; pressed brick and stone front, steam heat, electric light, etc. For George and Al. Hankins' "Garfield Park Club," on Madison and West Fortieth streets. To contain grand stand, 60 by 300 feet in size; betting stand, stables to accommodate 700 to 800 horses, bookmakers' stand, 100 by 200 feet; the whole to cost about $150,000.

Architects Holabird & Roche: For Chicago, Milwaukee & St. Paul railway, Evanston Division, a handsome station, to be erected at Sheridan Park; to be of stone with tile roof; interior finished in Georgia pine, and have a concrete platform 300 feet long by 50 feet wide.

Architect J. C. Brompton: For Stevenson, Baker, Betz & Charles Beck, twelve three-story frame hotels, near Jackson Park; cost $18,000 each.

Architect Robert Rae: For Frank Smith, on Woodlawn avenue and Forty-sixth street, a four-story flat building, 50 by 65 feet; cost $25,000; pressed brick and stone front, hardwood finish, steam heat, elevator, electric light. For William Wilson, a two-story residence, corner of Forty-sixth street and Oakenwald avenue; cut stone front, pressed brick sides, hardwood finish, electric light, steam heat. For Fadner Brothers, at Austin, a large number of frame houses; cost

about $2,000 each. For J. C. Snashall, on Ellis avenue near Forty-sixth street, three two-story residences; to have stone fronts, hardwood finish, steam heat, electric light, slate roof; cost $7,000 each. For William Fayerweather, at Hinsdale, a two-story frame residence; to have steam heat, all improvements, and cost $6,500. For J. P. Mallette, two-story flats at Eggleston; stone front, pressed brick sides, furnaces, electric light, etc.; cost $15,000. For Eggleston. Mallette & Brownell, two-story flats at Eggleston; granite front, hardwood finish, steam heat, electric light, etc.; cost $15,000. For T. C. Chichester, at Eggleston, twenty two-story houses; to have stone fronts, hardwood interiors, furnaces and all improvements; cost $6,000 each. For the same owner, at Auburn Park, five two-story flats; to be of stone front, have hardwood finish, furnaces, electric light; cost $6,000 each.

Architects Dahlgren & Lievendahl: For H. G. McCartney, on Atlantic street near Fifty-second, four frame cottages. Also two-story flat building of pressed brick and stone, cost $9,000, at Ravenswood. A three-story residence on Rhodes avenue, to have stone front, hardwood finish, hot water heating, electric light, tower of tile and copper, etc.

Architect J. E. O. Pridmore: For A. P. Spencer, on Oakenwald avenue and Forty-third street, a four-story apartment house, 100 by 63 feet, to have two fronts of Tiffany pressed brick and Bedford stone, interior hardwood finish, marble wainscoting, floors and steps, gas ranges, fireplaces, elevator, steam heat, electric light, etc.

Architect F. B. Townsend: For F. H. Day, on Belmont avenue near the lake shore, a two-story frame residence; hardwood finish, furnace, etc.; cost $7,500.

Architects Furst & Rudolph: For Brown & Fitts, on Union street near Indiana, a five-story factory, size 80 by 150 feet; cost $50,000. To be of mill construction, have steam heat, electric light, elevator, etc. For W. J. Moxley, a five-story factory extension, 40 by 80 feet; cost $12,000. Steam heat, elevator, etc. For Samuel Brown, Jr., at Sheridan Park, a two-story residence; cost $15,000. First story of mottled brick and above of shingles, hardwood interior, steam heat, etc. Making plans.

Architect E. R. Krause: For August Richter, on Surf street near the lake, a three-story residence of stone and pressed brick front, slate roof, hot water heating, electric light, etc.; cost $30,000. For the estate of Benjamin F. Tobin, southeast corner of Cottage Grove avenue and Thirty-third street, a six-story apartment house, size 123 by 74 feet; cost $125,000. Hydraulic pressed brick, terra cotta and stone front, hardwood interior, steam heat, three electric elevators, marble and mosaic work, mackolite fireproofing, electric light, etc.

Architect Perley Hale: For M. Shutterlee, at Auburn Park, three three-story stores and flats; cost $30,000. Stone fronts, stained and plate glass, sanitary improvements.

Architects G. Bloedner & Co.: For Henry Flentry, at 128 Wells street, a four-story store and flat building, 56 by 118 feet; cost $28,000. Obsidian pressed brick with galvanized iron bays, pine finish, etc.

Architect George W. Maher: For Johnston & Perry, on East End avenue and Fifty-fifth street, two two-story residences, of Roman pressed brick and stone, hardwood finish, furnaces, etc. For Ed. A. King, at Rogers Park, a two-story frame residence, furnace, etc.; cost $5,000.

Architects Donnellan & Burrows: For Graham & Son, on southwest corner of Desplaines and Monroe streets, a five-story hotel and bank building; cost $40,000. Terra cotta, brown brick and stone, steam heat.

Architect C. A. Weary: For S. W. Roth, corner of Lake street and Columbia place, a three-story store and flat building; cost $30,000. Collinsville pressed brick and stone. For Carne & Coombes, on Desplaines street, a seven-story factory, 40 by 90 feet; cost $28,000. Pressed brick and stone, steam heat, elevators. For C. F. Crowley, on Wilcox avenue near California avenue, a three-story flat building, of pressed brick and stone; cost $8,000. For Joseph Schoenthaler, on Union Park place, a two-story flat building.

Architects Faber & Pagels: For B. B. Switzer, on Twenty-first street, corner of Homan avenue, a three-story flat building; cost $7,000. For H. Fredericks, on Huron street near Ashland avenue, a three-story flat building, of St. Louis pressed brick and stone; cost $9,000.

Architect T. N. Bell: For Christian Brethren, church at Columbia, Missouri, size 75 by 120 feet, to seat 700, and Sunday school to accommodate 300. Pressed brick and stone, stained glass windows, steam heat, electric light; cost $15,000. Also making plans for Presbyterian church at Columbia, 80 by 158 feet; cost $15,000. For Mrs Mary F. Boyer, at Champlain avenue near Forty-fifth street, a three-story flat building of stone front, hot water heating; cost $6,000. For C. H. McCormick, southwest corner of Wabash avenue and Congress street, a two-story temporary building; cost $20,000. Iron skeleton front with plate glass, electric light, steam heat, etc.

Architect J. H. Wagner: For Gormully & Jeffrey, on Franklin street near Pearson street, a six-story factory, 60 by 100 feet; cost $35,000. Pressed brick and terra cotta, steel girders and cast-iron columns, steam heat, electric light. For Mrs. White, a two-story flat building, 50 by 65 feet; cost $12,000. For Bank of Chicago, in the Portland Block, marble wainscoting, etc.; cost $10,000.

Architect J. A. Miller: For William Seymour, on State street between Cedar and Elm streets, a four-story store and flat building, 79 by 184 feet; cost $50,000. Tiffany pressed brick and stone, steam heat, electric light.

Architects Snyder & Nothnagel: For W. A. Bayor, on Wabash avenue near Fifteenth street, a five-story business block, 50 by 170 feet; cost $65,000. Pressed brick and terra cotta, elevators, electric light, steam heat. For P. O. Donnell, on Twenty-second street and Douglas boulevard, a three-story store and flat building. For C. D. Cole, on corner of Belden avenue and Larrabee street, a four-story apartment house, 100 by 60 feet; cost $80,000. Steam heat, electric light, refrigerators, gas ranges.

Architect A. F. Hussander: For R. Henderson, on Cleveland avenue, a three-story flat building, of Tiffany pressed brick and stone; cost $12,000. For W. S. Hussander, on Halsted street near Nellie avenue, a three-story store and flat building; cost $10,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall:

Architects S. Hannaford & Sons report: For the Cincinnati *Times-Star*, an office building eight stories high. For Mr. S. F. Dana, two buildings; materials, pressed brick, stone trimmings, hardwood, gas, plumbing, furnace, grates, mantels, stained glass, etc. For the Methodist Episcopal Church, Insuminsville, city, a church edifice; materials, stone, brick, slate roof, hardwood finish, furnace, stained glass, pews, mantels, etc. Other work in hand not ready for the public.

Architect George W. Vogel reports: For Mr. Lawrence Rabe, two dwellings; materials, brick, tin roof, pine finish, blinds, gas, mantels, etc.; cost $8,000. Also a large warehouse for E. Block & Son, to be erected at Prestonville, Kentucky; cost $15,000.

Architect Henry E. Siter reports: For Mr. Charles H. Dahme, a residence; materials, pressed brick, tile roof, terra cotta, hardwood finish, furnace, hardwood floors, etc.; cost $20,000.

Architect Theodore Richter, Jr., reports: For Mr. F. W. Browne, a four-story flat; materials, pressed brick, stone, slate roof, pine finish, wood mantels, etc.; cost $15,000. Also for Henry Ratterman, Price Hill, city, a residence; materials, frame, slate roof, pine finish, blinds, furnace, etc.; cost $6,500.

Mr. F. G. Huntington is about to build a five-story factory for F. Closson, Jr., & Co., to be used for an art gallery and picture frame factory; materials, brick, iron, tin roof, elevator, steam heat, etc.; cost $10,000.

Architects G. & A. Brink report: For Mr. F. Unnewehr, 7 Dandridge street, a cigar factory; materials, brick, tin roof, cornices, freight elevators, gas, plumbing, fire escapes, etc.; cost $11,000.

Architect G. W. Drach is preparing plans for an addition to Longview Asylum; cost about $50,000. Also for the Marmet Coal Company, an office building. Both of these are under way.

Architects Crapsey & Brown have prepared plans for a house for Mr. F. S. Owings, Maysville, Kentucky; materials, pressed brick, shingle roof, blinds, plumbing, gas, stained glass, mantels, etc.; cost $5,000.

Architect S. S. Godley has prepared plans for Mrs. H. B. Lupton, Avondale, city, for a residence; materials, frame, slate roof, furnace, blinds, hardwood, stained glass, gas, plumbing, etc.; cost $4,500.

Architects Des Jardins & Hayward report the following: For Mr. W. H. Blymyer, an office building eight stories high; materials to be brick, iron, stone, with tin roof, hardwood finish, hydraulic elevator, steam heat, tiling, etc. For the same party, a six-story building; materials, pressed brick, iron, tin roof, hydraulic elevator, steam, gas, plumbing, etc. For the Dutch Reformed Church, a church and parsonage; materials, common brick, tin roof, pine finish, pews, stained glass, furnace, blinds, gas, plumbing, etc.; cost $9,000. For Mr Robert Leslie, a frame dwelling, with slate roof, hardwood, grates, mantels, plumbing, blinds, stained glass, etc.; cost $5,000. For the town of Lawrenceville, Illinois, a schoolhouse; materials, brick, slate roof, blackboards, school furniture, etc.; cost $14,000. Busy on other work.

Cleveland, Ohio.—Architect F. C. Bate: For F. A. Glidden, a two-story residence; size 35 by 55 feet, stone and frame, slate roof; cost $6,000.

Architect B. F. Van Develde: For J. O'Donnell, a two-story residence; frame, stone foundation; size 28 by 60 feet; cost $5,500. Also, for the Roman Catholic congregation, a two-story brick church; size 74 by 100, stone trimmings; cost $25,000.

Architect A. D. Kent: For John Pallister, a two-story frame residence; size 38 by 56 feet, slate roof; cost $5,300.

Architects Coburn & Barnum: For the Case School, a three-story laboratory building; size 44 by 58 feet, brick and stone; cost $25,000.

Denver, Colo.—Architect H. T. E. Wendell: For S. B. Morgan, a stone residence; size 50 by 70 feet, tile roof; cost $50.000.

Architect F. Goodnow: For Mr. Rogers, a three-story hotel; pressed brick; cost $35,000.

Architects Balcomb & Rice: For J. M. Daily, a brick residence; cost $10,000.

Detroit, Mich.—Architect G. W. Lloyd: For the Woman's Hospital and Foundlings' Home, a brick building on Forest avenue; stone trimmed, slate roof; cost $50,000. For David Whitney, Jr., repairing buildings recently burned, on Larned street.

Architects Rogers & Macfarlane: For Robert Murray, a block of three-story residences; cost $15,000. For Gen. R. A. Alger, a two-story frame summer residence at Lake St. Clair; cost $6,000.

Architects Mason & Rice: For John Cleven, a two-story brick and stone residence; cost $10,000. For Francis F. Palms, remodeling and enlarging brick residence on Jefferson avenue and Russel street.

Architect Joseph E. Mills: For the State Institution for the Criminal Insane, at Ionia, Michigan, a three-story brick building; stone trimmings; size 118 by 124 feet; cost $25,000.

Architect A. E. French: For Nathaniel J. Hubbell, two two-story brick residences on Cass avenue and Columbia street; cost $9,000.

Architects Donaldson & Meier: For the St. Elizabeth Roman Catholic Church, a two-story brick schoolhouse; cost $7,100.

Architect Edward C. Van Leyen: For F. W. Kellogg, a two-story brick residence on Kirby avenue near Woodward; cost $10,000. For C. R. Clarke, at Port Huron, Michigan, a double frame residence on Military avenue; cost $5,500.

Architects M. L. Smith & Son: Repairs for the Campan Building.

Architect E. W. Arnold: For the Ann Arbor University, a gymnasium; brick stone trimmed; cost $45,000.

Architects A. C. Varney & Co.: For Joseph W. Dailey, a four-story brick block; cost $25,000. For H. S. Robinson & Co., a three-story brick shoe factory; size 40 by 80 feet; cost $8,000.

Architects Spier & Rohns: For the Trinity German Lutheran Church Society, a frame building; cost $8,000. Also for the Gethsemane German Church, a frame building on Twenty-eighth and Rich streets; cost $8,000. For the German Lutheran Society, a frame building; cost $7.000.

Architect Harry J. Rill: For Samuel Moyer, a two-story brick double residence; cost $7,000.

Architect J. G. McLean: For the Ever Ready Dress Stay Company, Windsor, Ontario, a three-story brick manufacturing building; cost $9,000. For Dr. R. Casgrain, Windsor, Ontario, a two-story brick residence; cost $6,000.

Architects John Scott & Co.: For Charles L. Calvert, a two-story brick and stone residence on Rowena street; cost $9,000.

All buildings of any size are stopped, and have been for six weeks, on account of stonecutters' strike, but an early settlement is expected now.

Max Meadows, Va.—Architect Henry L. Curtis: For Jacob C. McGavock, alterations and additions to old residence; cost about $5,500. For the Max Meadows Iron Company, an office building and laboratory, two-story frame, shingle roof, size 37½ by 23½ feet; cost $2,000.

Milwaukee, Wis.—Architect Frederick Velguth: For George Brumder, remodeling store, four stories, brick and stone; cost $5,000.

Architect W. A. Holbrook has prepared plans for the Congregational Church Society, a brick church with stone trimmings, slate roof; cost $20,000.

Architects H. C. Koch & Co., for the Protestant Home for the Aged Society, a two-story brick and stone "home," size 120 by 42 feet; cost $35,000.

Architects Rau & Kirsch are preparing plans for the county court house at Oconto, Wisconsin.

Minneapolis, Minn.—Messrs. Peterson & Lofgren Bros. will erect a four-story apartment building, frame, on Ninth avenue; cost $20,000.

M. J. Daniels will build a residence, frame, two stories; cost $6,000.

The Minneapolis Grain & Feed Company are having plans prepared for a large warehouse; cost about $30,000.

Ogden, Utah.—Architect William W. Fife: For J. M. Langsdorf, a two-story brick and stone residence, with attic and basement, size 45 by 60 feet; cost $10,000. For John Scowcraft, a two-story brick and cut stone residence, size 40 by 55 feet; cost $12,000. For B. White, a two-story residence, brick and stone, 50 by 65 feet; cost $12,000. For James Cassin, a three-story store and office building, brick, size 22 by 75 feet; cost $9,000.

Omaha, Neb.—Architects Findlay & Shields: For the University of Omaha, have prepared plans for a two-story addition, boys' residence, size 94 by 50 feet, brick and stone trimmings; cost $12,000.

Pittsburgh, Pa.—Architect J. W. Offerman: For the Italian Church congregation, a two-story brick church, stone trimmings; cost $12,000. Also has prepared plans for Father Sheedy's congregation, a new church on Third avenue and Ferry street; Romanesque style, brick with stone trimmings; size 59 by 79 feet; cost $20,000.

Architect S. T. McClarren is preparing plans for the congregation of the Grace Lutheran Church, for a new church building; to cost $15,000.

F. McKnight will erect two two-story brick dwellings, size 22 by 50 feet, slate roof; cost $10,000.

Miss Julia Wolinske will build a two-story residence, frame, wood roof, size 24 by 30 feet; cost $6,000.

Architect J. P. Bailey is preparing plans for a schoolhouse building, to be erected at Homewood; cost $60,000.

R. M. Pyatte will build a two-story brick dwelling, size 27 by 42 feet, slate roof; cost $5,000.

Springfield, Ill.—Architect George H. Helmle: For Sisters of St. Francis, addition to St. John's Hospital, 80 by 76 feet, four stories high, brick, with stone foundation and trimmings, hot water heating, sanitary plumbing, etc.; cost $18,000. For Hickox, Pierik & Hickox, two-story brick and stone store building, 61 by 50 feet, plate glass, steel beams, pressed brick and stone front; cost $12,000. For Charles L. Ahll, two two-story frame cottages; cost $4,500; furnace heat. For E. S. Gard, frame dwelling, ten rooms, furnace heat, wood mantels, stained glass; cost $6,000. For school directors, Athens, Illinois, addition to schoolhouse, two-story, brick and stone, steam heat; cost $4,800.

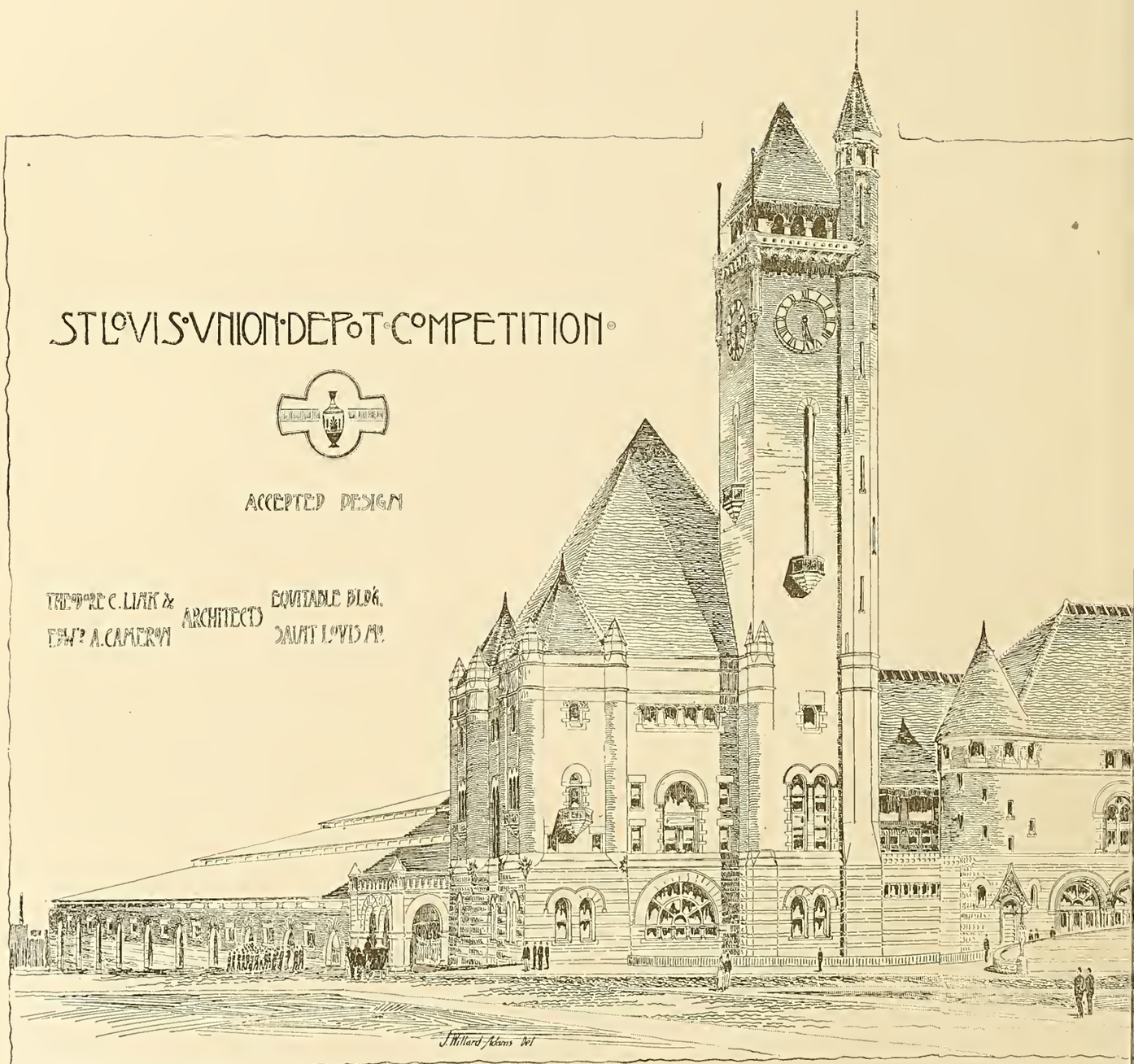
St. Louis, Mo.—Architects Beinke & Wees: For Mr. Peters, a shoe factory, three stories, size 55 by 91 feet, brick and stone; cost $30,000.

Architects James Stewart & Co.: For the Pan Handle Railroad Company, Cincinnati, Ohio, a brick storage freight house, size 500 by 105 feet; cost $100,000.

Architects Eames & Young: For T. A. Meyscnbury, a three-story residence, size 50 by 80 feet, brick and stone; cost $23,000. Also for E. A. De Wolfe, a two-story dwelling, at Chamberlin Park, size 40 by 65 feet, brick and granite; cost $12,000.

Architect O. J. Wilhelmi: For Fred Erhardt, a two-story store and flat building, size 50 by 65 feet, stone and brick; cost $8,500.

Architect J. Beattie: For C. C. McDonald, a two-story residence, pressed brick, stone foundation, size 40 by 33 feet; cost $6,500.


ST LOUIS UNION DEPOT COMPETITION
ACCEPTED DESIGN
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SAINT LOUIS MO.
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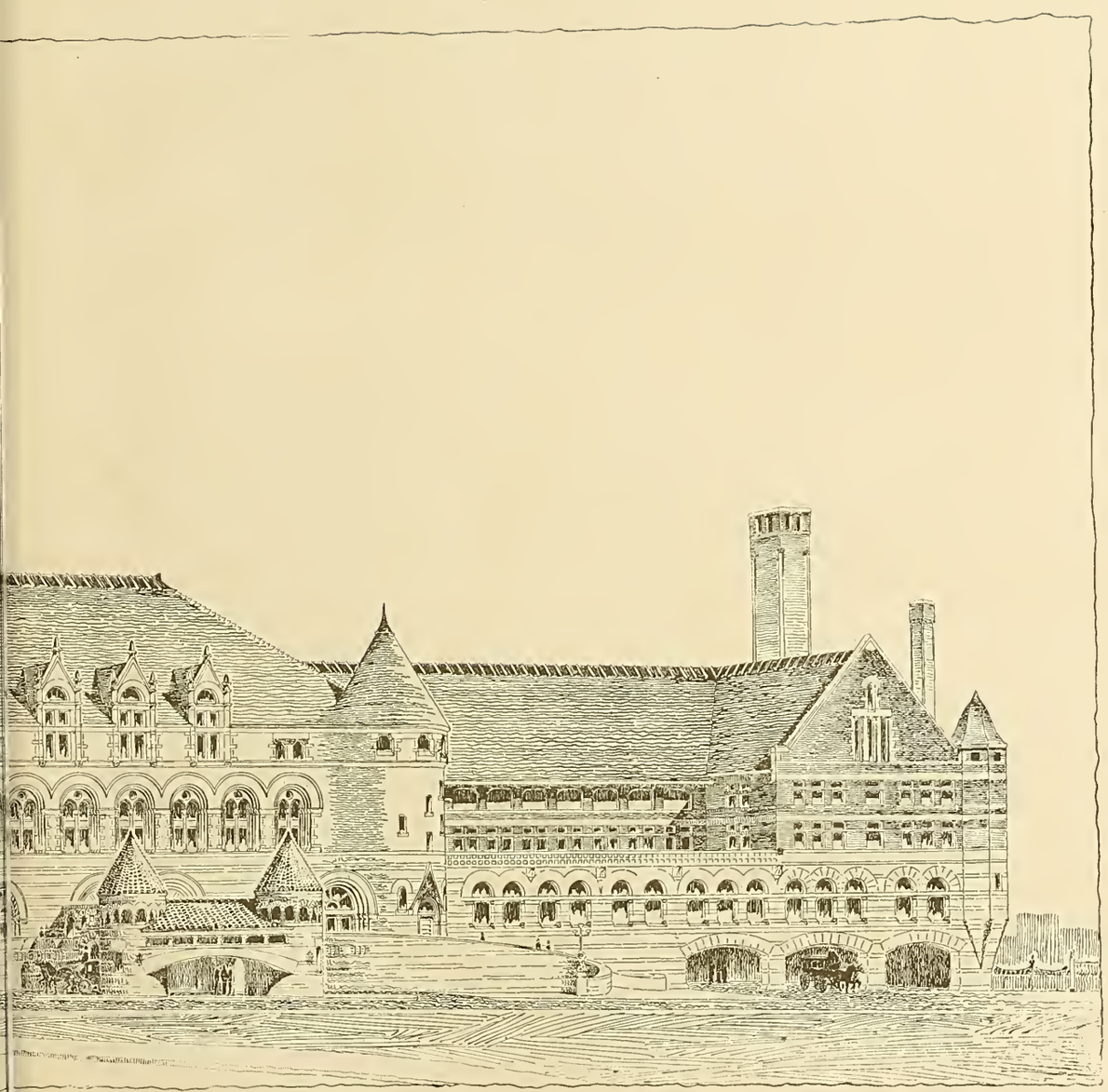

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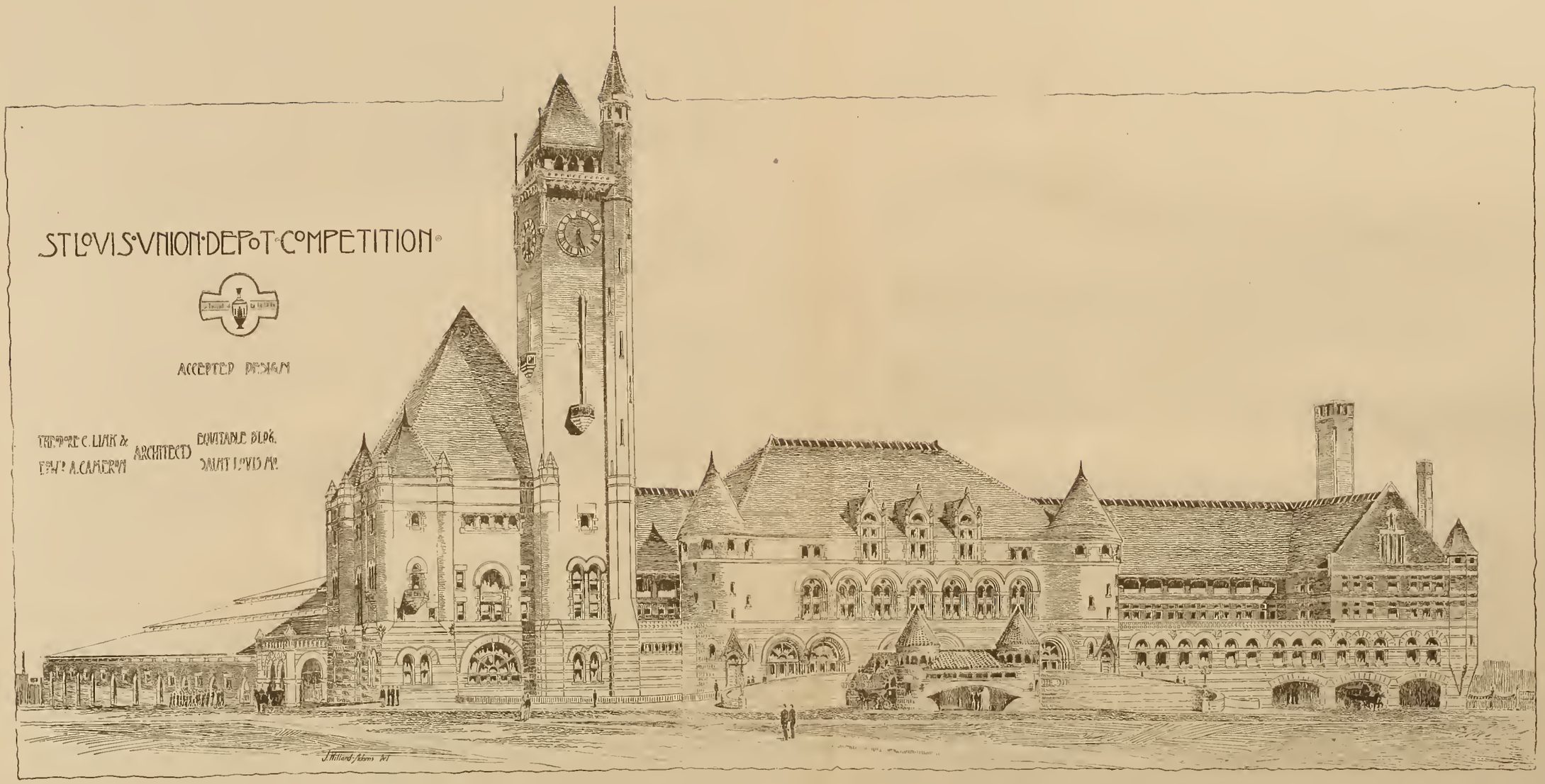

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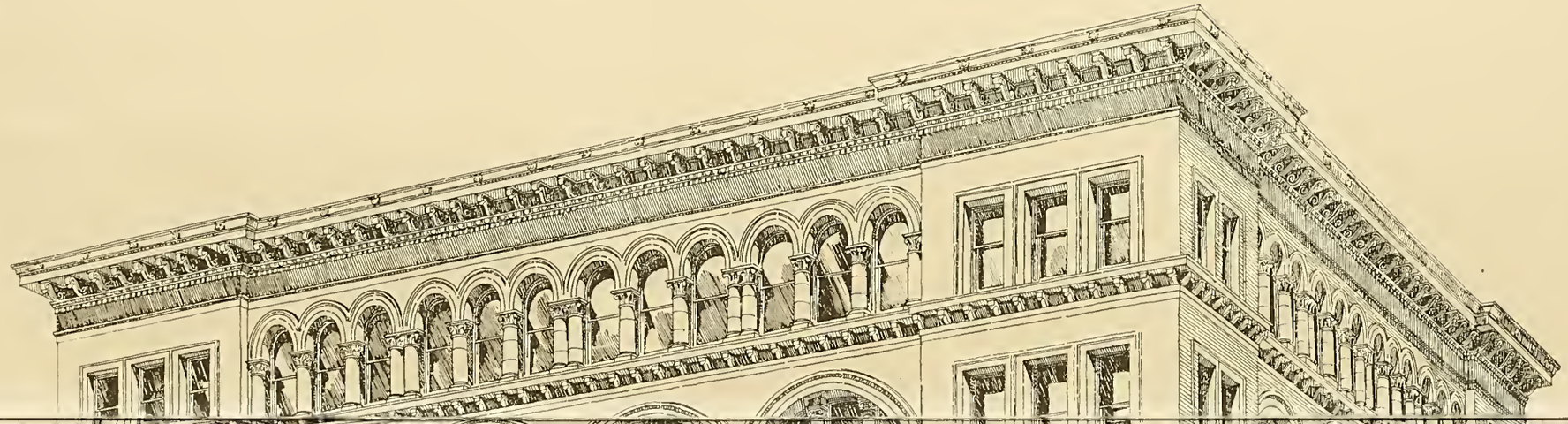

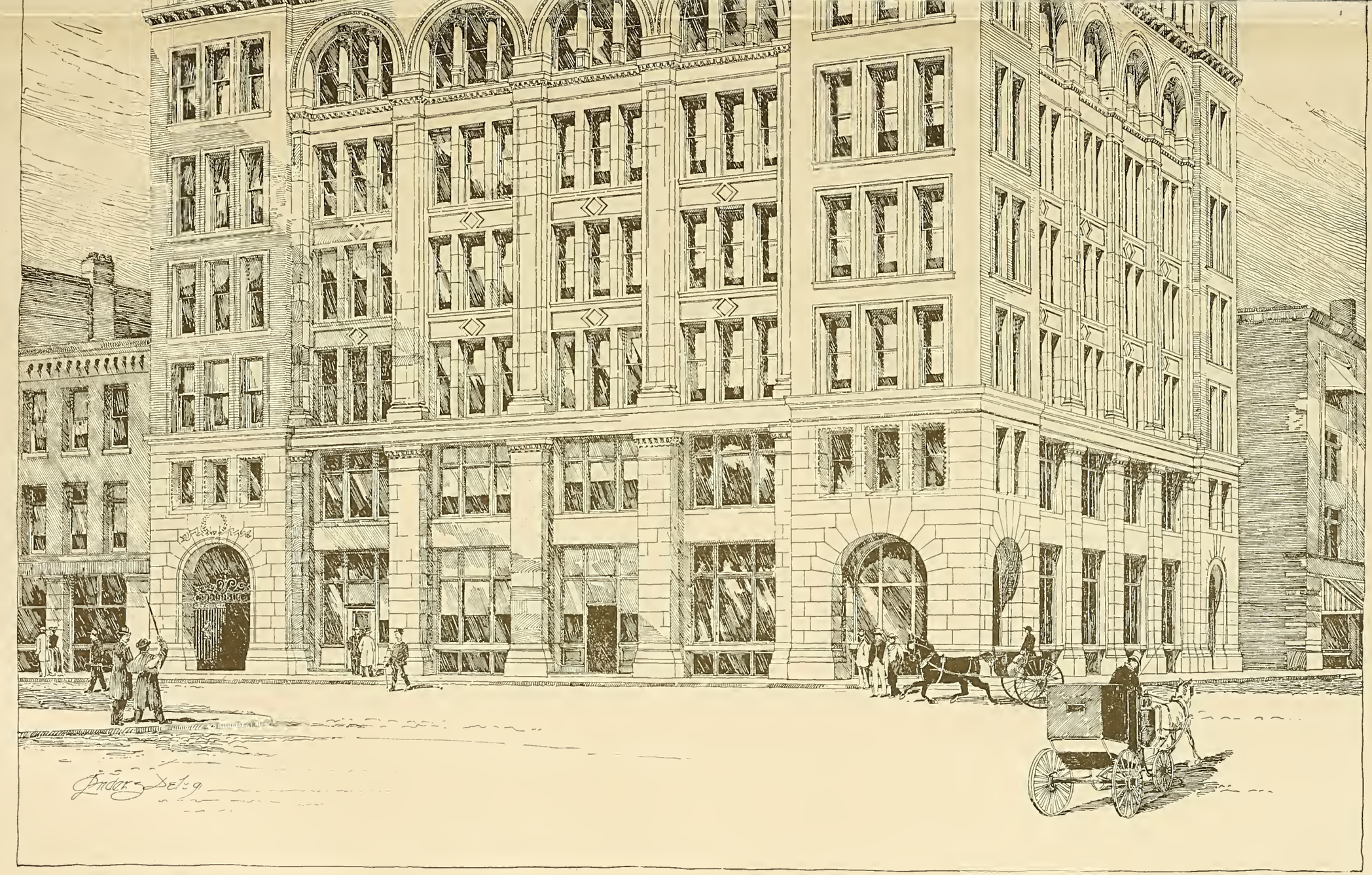

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GRAND RAPIDS, MICH.

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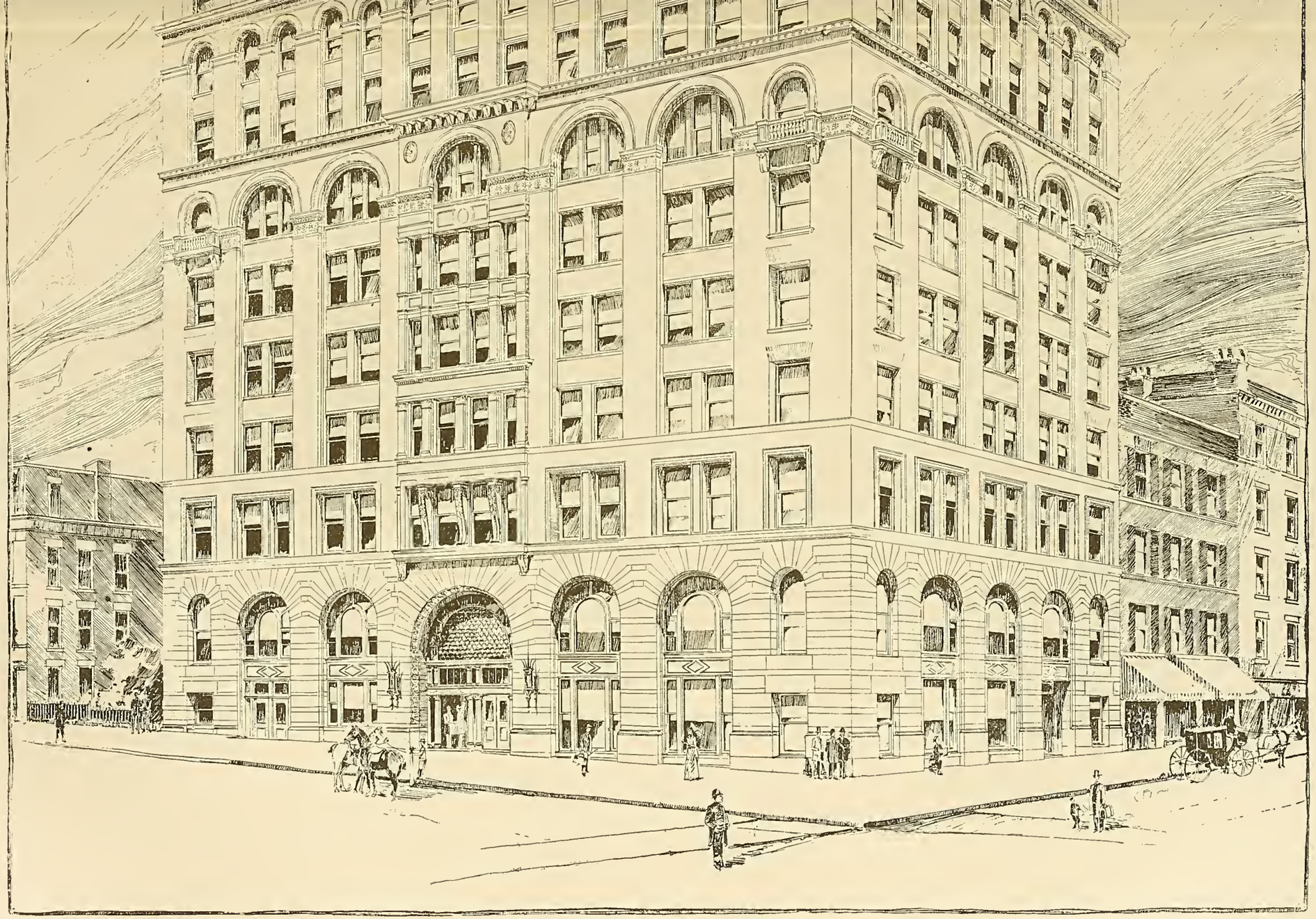

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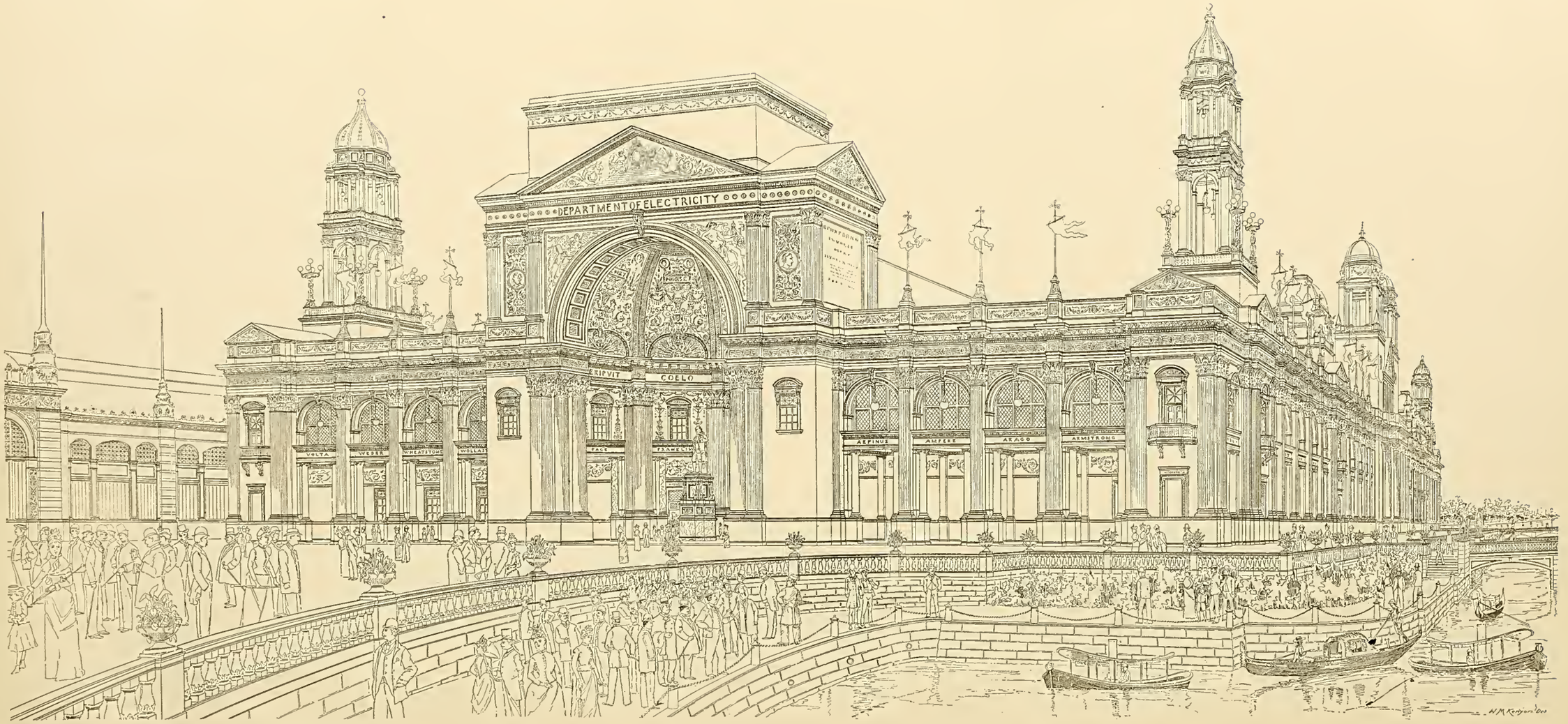

PERSPECTIVE VIEW OF ELECTRICITY BUILDING, WORLD'S COLUMBIAN EXPOSITION, DEPARTMENT OF CONSTRUCTION, JUNE, 1891.

VAN BRUNT & HOWE, ARCHITECTS, KANSAS CITY.

ST·LOUIS·UNION·DEPOT

ACCEPTED DESIGN

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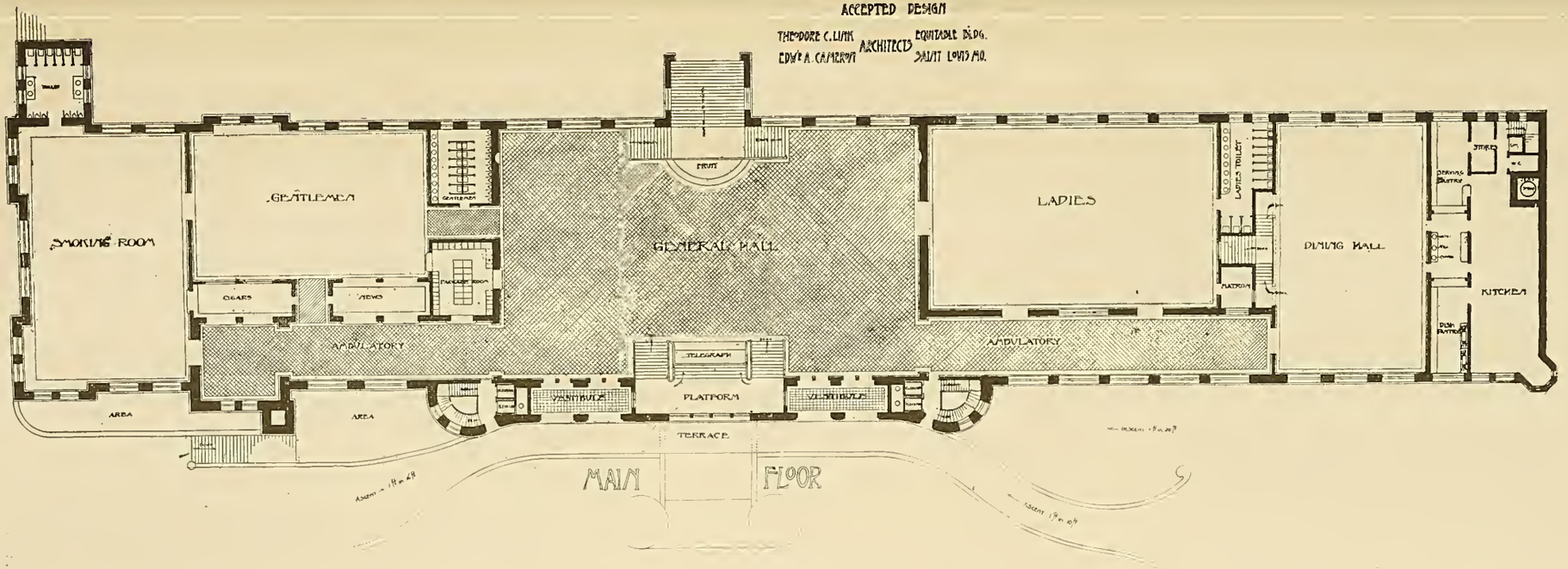

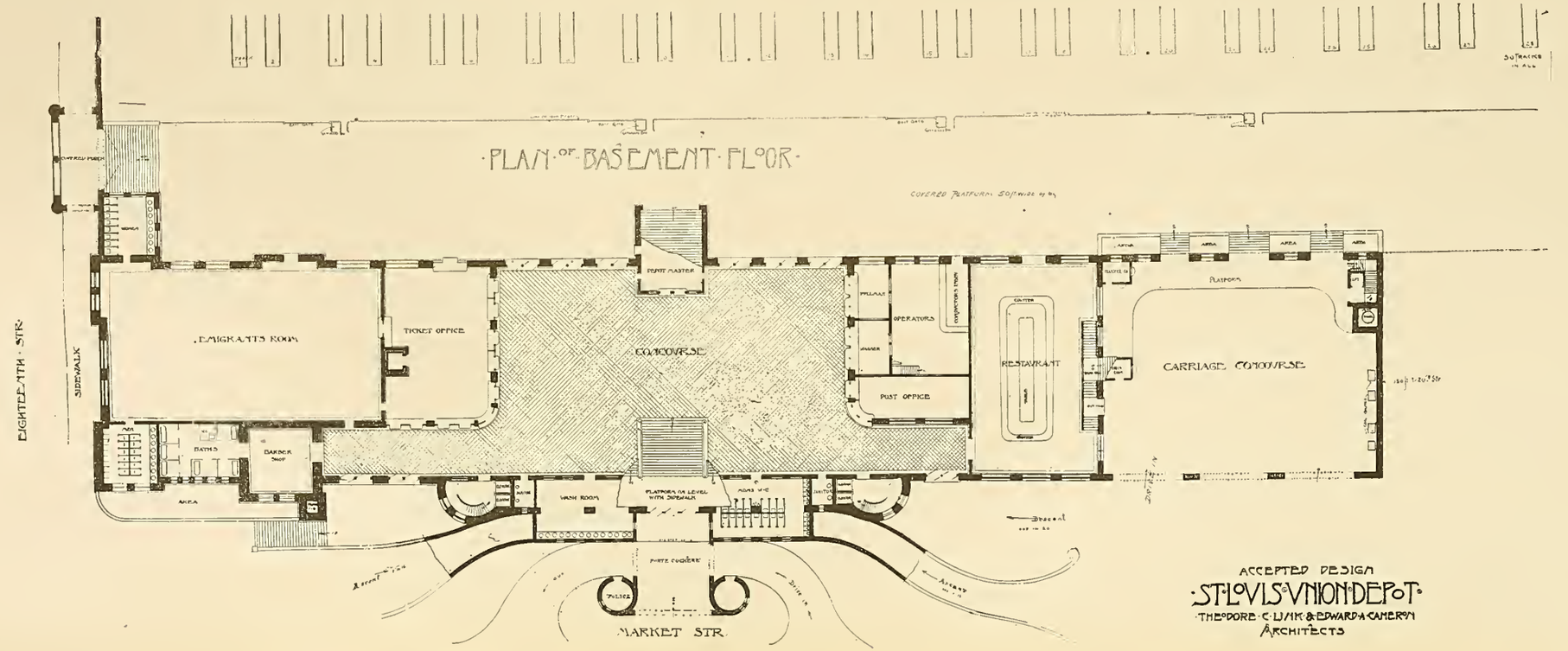

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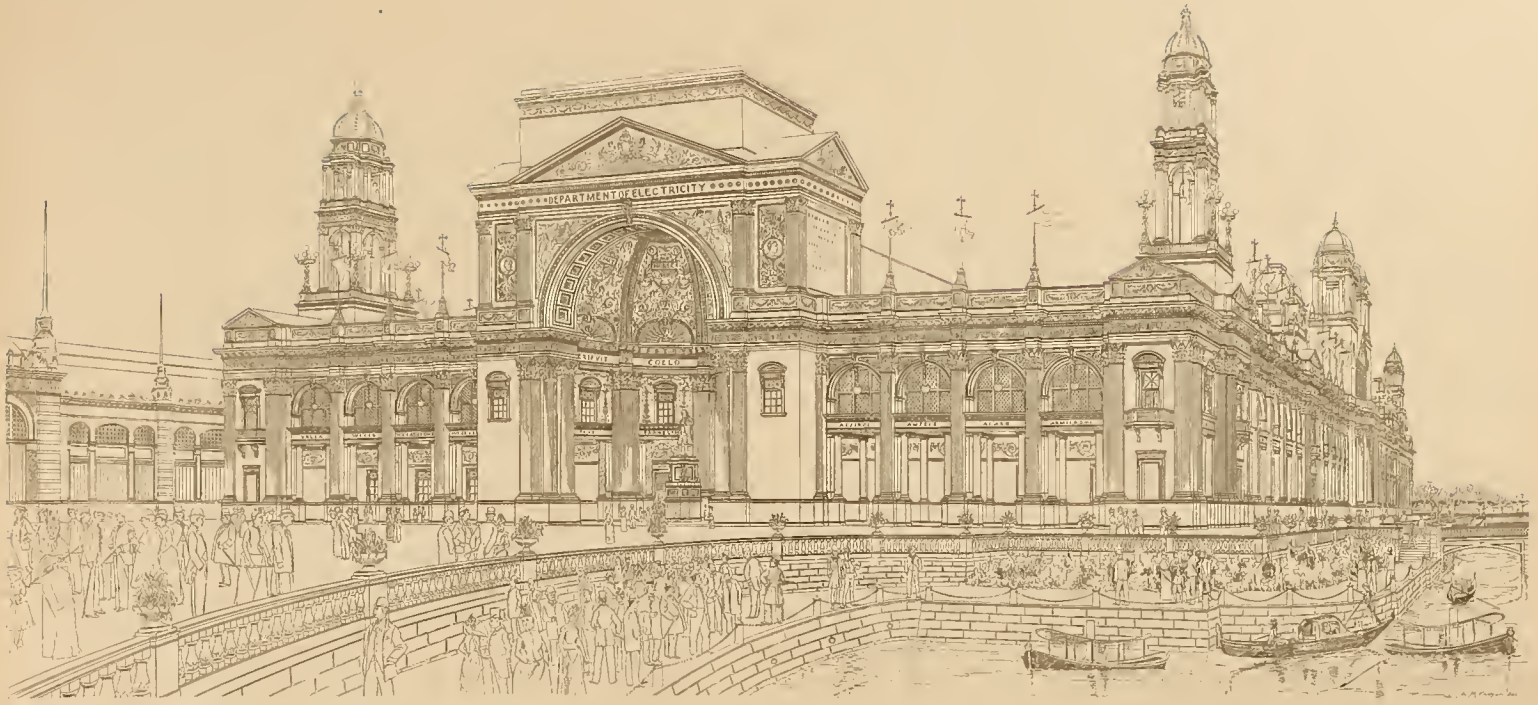

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